ADDENDUM NO. 3

APPOQUINIMINK SCHOOL DISTRICT
BRICK MILL EARLY CHILDHOOD CENTER
380 BRICK MILL ROAD
MIDDLETOWN, DE 19709

THE WHITING-TURNER CONTRACTING COMPANY
CONSTRUCTION MANAGER
131 Continental Drive – Suite 404
Newark, DE 19713
302-292-0676

BIDS DUE: **JULY 23, 2020 at 2:00 PM**

LOCATION: ******* **CHANGE IN LOCATION** *******
Marion E. Proffitt Training Center, Loading Dock
118 South Sixth Street
Odessa, DE 19730

NOTICE TO ALL BIDDERS

1.0 GENERAL NOTES:

1.1 Bidders are hereby notified that this Addendum shall be and hereby becomes part of their Contract Documents, and shall be attached to the Project Manual for this project. All bidders shall acknowledge this addendum on the Bid Form.

1.2 The following items are intended to revise and clarify the Drawings and Project Manual, and shall be included by the Bidder in their proposal.

1.3 Bidders shall verify that their Sub-bidders are in full receipt of the information contained herein.

1.4 Deadline for questions shall be July 20, 2020.

1.5 Successful contractors shall provide the following contract items within seven (7) calendar days of receipt of contract. These items will be required for the Appoquinimink School District to issue a purchase order:

1.5.1 Fully executed contract

1.5.2 Insurance certificate

1.5.3 Fully executed payment & performance bonds

2.0 CHANGES TO THE PROJECT MANUAL and DRAWINGS

2.1 See Architect's Narrative for Drawing Changes
2.2 See Architect's Narrative for Specification Changes

3.0 ATTACHMENTS

3.1.1 Architect's Narrative
3.1.2 Bid Question Log
3.1.3 Update Specifications
3.1.4 Updated Drawings

END OF ADDENDUM NO. 03

ADDENDUM NO. 3

Specifications and/or Drawings for
Brick Mill Early Childhood Center - #2001
Appoquinimink School District

July 16, 2020

Gilbert Architects
626 N. Charlotte St.
Lancaster, PA 17603
Studio Director:
Rod Frey, Jr.

Revisions and modifications contained in this Addendum supersede the previously issued documents for the above referenced Project.

SPECIFICATION REVISIONS

Item S1-1 TABLE OF CONTENTS
Division 07- THERMAL AND MOISTURE PROTECTION
Add Section 074000 – METAL SIDING PANELS
Division 09 – FINISHES
Add Section 090600 – ROOM FINISH SCHEDULE – COLOR LEGEND
Division 10 – SPECIALTIES
Add Section 100600 – SPECIALTIES SCHEDULE – INSTRUCTIONAL BOARDS
Division 12 – FURNISHINGS
Add Section 120600 – FURNISHINGS SCHEDULE – PLASTIC LAMINTE CASEWORK

Item S1-2 SECTION 074000 – METAL SIDING PANELS
Add section in its entirety

Item S1-3 SECTION 090600 – ROOM FINISH SCHEDULE - COLOR LEGEND
Add Room Finish Schedule - Color Legend

Item S1-4 SECTION 093013 – TILING
Delete all references of waterproofing membrane including:
Delete 1.2.A.4. Waterproof membrane.
Delete 2.4 WATERPROOFING MEMBRANE in its entirety.
Delete 3.5 INSTALLATION OF WATERPROOF MEMBRANE in its entirety.

Item S1-5 SECTION 100600 – SPECIALTIES SCHEDULE – INSTRUCTIONAL BOARDS
Add Specialties Schedule – Instructional Boards

Item S1-6 SECTION 120600 – FURNISHINGS SCHEDULE – PLASTIC LAMINATE CASEWORK
Add Furnishings Schedule – Plastic Laminate Casework

Item S1-7 SECTION 260740 – NETWORK CABLING SYSTEMS

Page 260740-5, Paragraph 2.1.I.4: REVISE to read:

"The wiring medium for the Communications Cable Network consists of Category 6+– 6a 24AWG Unshielded Twisted Pair (UTP) for station cabling and multi pair twisted copper for backbone cabling to support low- speed voice or Data, Category 6+ or 6a for high speed LAN technologies, single mode 8.3/125 micron for even higher bandwidth requirements. The unshielded twisted pair (UTP) Category 6+ or 6a LAN cables can support Data transmission rates of 100, 250 and 500 up to 1000Mb/Sec respectively according to EIA/TIA Standards and manufacturers' specifications."

Item S1-8 SECTION 280721 – FIRE ALARM AND DETECTION SYSTEMS

Page 280721-14, Paragraph 1.10.A:

- REMOVE 1 through 4.
- ADD the following:

"1. Smoke sensors and sensor bases: Furnish 10 smoke sensors, 1 heat sensor and 2 sensor bases."

Item S1-9 SECTION 280727 – INTEGRATED ACCESS CONTROL & SECURITY MANAGEMENT SYSTEM

a. Page 280727-3, Paragraph 1.3.C.3: REVISE to read:

"The SMS shall employ a FIPS 197-listed AES 256-bit encryption between the SMS Servers, Clients, and iSTAR Ultra/eX Controllers."

b. Page 280727-4, Paragraph 1.3.C.5.f: REVISE to read:

"FIPS 140-2 encryption (certified for the iSTAR Ultra/eX controllers)."

c. Page 280727-43, Paragraph 2.5.D.1: REMOVE item d.

d. Page 280727-44, Paragraph 2.5.E.3: REVISE to read:

"The SMS shall support iSTAR clusters in two types: Encrypted and Non-Encrypted. Encrypted clusters shall support iSTAR eX/Ultra controllers. Unencrypted clusters shall support iSTAR Classic/ iSTAR Pro/unencrypted Ultra controllers."

e. Page 280727-45, Paragraph 3.1.: ADD the following:

"E. Cards: Provide 100 access cards in addition to the staff quantity obtained from district. Coordinate with district to provide card numbers and facility code prior to ordering."
F. Card reader: Provide card readers at locations indicated on the drawings along with (1) located next to each intrusion system key pad for arming/disarming of system."

Item S1-10 SECTION 280728 – CCTV – NETWORK DIGITAL VIDEO MANAGEMENT SYSTEM

3. Camera model numbers indicated on drawings are for pricing proposes only. Contract to coordinate/confirm with district the specific model numbers requested prior to ordering equipment."

DRAWING REVISION

Item D1-1 Drawing G0.1 – COVER SHEET
Add "CC-17 – STORM DRAINAGE PROFILES" to the Civil Index of Drawings.
Add "CC-18 – PHASE 1 – LINES AND GRADES PLAN" to the Civil Index of Drawings.
Add "CY-04 – CONSTRUCTION IMPROVEMENT PLANS SANITARY SEWER DETAILS" to the Civil Index of Drawings.

Item D1-2 Drawing A3.0 – PARTITION TYPES
Add partition type D66. Refer to sketch SK-A-001.

Item D1-3 Drawing A3.4 – ROOM FINISH SCHEDULE
Add "SV Sheet Vinyl" to the Room Finish Schedule Legend.

Item D1-4 Drawing A9.1 – ENLARGED PLANS AND INTERIOR ELEVATIONS
Enlarged Plan 2/A9.1 – Add "N.I.C." to the note about fire-resistant lateral files in A146 FILES.
Enlarged Plan 2/A9.1 – Add "N.I.C." to the note about 2-drawer lateral files in A150 PRINCIPAL.

Item D1-5 Drawing A12.1 – PLAYGROUND LAYOUTS
Add scale of "3/32" = 1'-0"".

Item D1-6 Drawing E3.1, PARTIAL FIRST FLOOR LIGHTING PLAN – AREA 'A':

a. CHANGE light fixtures in Multi-Purpose A136 to type “A” and “A”(E). Refer to attached Drawing E3.1.

b. REVISE switching number of light fixtures in Multi-Purpose A136. Refer to attached Drawing E3.1.

c. CHANGE light fixtures in Reception A153 and Corridor A148 to type “A2” and “A2”(E). Refer to attached Drawing E3.1.

Item D1-7 Drawing E5.1, DETAILS – ELECTRICAL

a. ADD General Special Systems Notes and Panic Alarm Systems note. Refer to attached Drawing E5.1

Item D1-8 Drawing E6.1, SCHEDULES & LEGENDS – ELECTRICAL

a. REVISE Light Fixture Schedule. Refer to attached Drawing E6.1.

b. ADD lighting substitution manufacturer and catalog number in Light Fixture Schedule. Refer to attached Drawing E6.1.

Item D1-9 Drawings EL-1, EL-2, EL-3, EL-4, EL-5, & EL- 6 Issued

STRUCTURAL REVISIONS N/A

HVAC REVISIONS N/A

PLUMBING REVISIONS N/A

FIRE PROTECTION REVISIONS N/A

FOOD SERVICE REVISIONS N/A

BRICK MILL EARLY CHILDHOOD CENTER APPOQUINIMINK SCHOOL DISTRICT - #2001
Addendum #3 - 7/17/2020

#	Division of Work	Drawing Set	Discipline	Document Reference	Question/Comment	Date of Response	Response
1	09	CD	Architectural	A3.4	There are multiple floor finishes listed in the schedule as SV-1. SV is not listed in the room finish schedule legend. Please advise what this product is	7/16/2020	SV is the abbreviation for sheet vinyl.
2	07	CD	Architectural	Life Safety	Confirm no fire rated walls and no fire rated openings.	7/16/2020	Confirmed. There are no fire rated walls and no fire rated openings.
3	04	CD	Architectural	A6.0	Details 1, 2, & 8 call for CMU partition head details. No CMU partitions are shown to be installed on this project. Please confirm and remove unnecessary details.	7/16/2020	Confirmed. There are no CMU partitions on this project.
4	09	CD	Architectural	A6.0	Details 3, 4, 5, & 6 call for rated stud partition head of wall details. The life safety drawings indicate that there are no fire rated walls on this project. Please confirm and remove unnecessary details.	7/16/2020	Confirmed. There are no fire rated stud partitions on this project.
5	09	CD	Architectural	A6.0	Detail 7 on A6.0 describes a non-rated or smoke resistant stud partition head detail. This particular detail, however, shows that fire safing material and sealant must be installed. There is also a note that states "Note: Seal all penetrations in wall -fluted steel deck/concrete floor or roof perpendicular or diagonal to flutes - similar to where parallel to flutes". If this wall type is not fire or smoke rated then why do we need to install fire safing and fire sealant material and why do we need to seal the flutes of the deck?	7/16/2020	Refer to Life Safety drawings A1.3 and A1.4 for smoke partition locations.
6	09	CD	Architectural	A6.2	Note 12 from General Notes Building and Wall Sections (A6.2) reads: WHERE EXTERIOR WALLS MEET METAL DECK, SEAL ALL GAPS AT METAL DECK FLUTES, STRUCTURAL MEMBERS, OR ANY OTHER VOIDS WITH 2" MINIMUM SPRAYED INSULATION. Is this information detailed anywhere in the drawings? Should it be the same spray foam insulation as used on the exterior walls? Please provide more information and a detail if possible.	7/16/2020	Provide insulation as indicated in the bid documents.
7	09	CD	Architectural	093013	Tile specification calls for waterproofing membrane. Should this membrane be installed under every tile floor? Should this membrane be installed behind wall tile? if so it is assumed at bathrooms not "wainscoting" wall protection.	7/16/2020	Waterproofing membrane is not required. Will be clarified in an addendum.
8	07	CD	Architectural	A6.5	No below grade waterproofing or damproofing is shown to be installed on the foundation walls. Please confirm.	7/16/2020	Confirmed. There is no waterproofing or dampproffing being installed on the foundation walls.
9	10	CD	Architectural	A9.1	In room "A146 Files" there are five (5) Fire-resistant 4-Drawer Lateral Files shown. The majority of "loose" furniture has the tag N.I.C. but these lateral files do not. Is WT assumed to own these or are they by the owner? If by WT, please provide additional information/details.	7/16/2020	These items are N.I.C. and will be purchased as a part of the FF&E package.
10	10	CD	Architectural	A9.5	General Note 5 states that the owner is responsible for furnishing AND installing paper towel and soap dispensers at ALL sink locations U.N.O. Are there any locations where the subcontractors must provide paper towel and/or soap dispensers that the owner is NOT providing? Note 6 states that the owner is responsible for furnishing AND installing toilet tissue dispensers at all toilets. To confirm, WT and the subcontractors are NOT responsible for furnishing or installing any toilet tissue, paper towel, and soap dispensers?	7/16/2020	Confirmed.
11	10	CD	Architectural	A9.1	In room "A150 Principal" there are two (2) 2-Drawer Lateral Files with Bookshelf Above shown. The majority of "loose" furniture has the tag N.I.C. but these lateral files do not. Is WT assumed to own these or are they by the owner? If by WT, please provide additional information/details.	7/16/2020	These items are N.I.C. and will be purchased as a part of the FF&E package.
12	33	CD	Civil	CE0.6	Under Construction Staging IV can step H be started after Step C ? Current phasing will require digging thru base course to install storm sewer.	7/16/2020	yes. The Sequence of Construction has been revised to place utiilites prior to the base course.The provided SOC is a general, as required by the delegated agency
13	33	CD	Civil	CE0.6	Under Construction Staging IV there is not any mention of cut/fill of building pad. Can this be done after completion of step D?	7/16/2020	yes. The Sequence of Construction has been revised to prepare the building pad once E&S controls are placed and approved.The provided SOC is a general sequence as required by the delegated agency
14	22	CD	Architectural		Since this is an Early Childhood Center, should smaller toilets and lower mounting heights be used for little people?	7/16/2020	Provide plumbing fixtures as indicated on the bid documents.
15	09	CD	Architectural	6/A6.2	Wall type D66 is not defined. Can you provide a detail?	7/16/2020	Detail will be provided as part of an addendum.
16	08	CD	Architectural	A8.2 / 088725	Jamb detail at frames receiving ballistic film do not match spec 088725. Which detail is to be provided?		
17	31	CD	Civil	N/A	Who will be providing the CCR for the project?	7/16/2020	Landmark will be providing the CCR
18	07	CD	Architectural		Please provide specification section for metal siding and metal flat-lock panels	7/16/2020	Specifications will be provided as part of an addendum.
19	27	CD	Electrical	E4.2	Clarify if communication conduit extends into the existing building from the existing Hand Hole		
20	26	CD	Telecomm	260740	Please provide enlarged, less blurry figures 1-8 documents.		
21	31	CD	Civil	CC-01	CC-01 9. Parking Calculations states that 18 bike racks are required (1 5-space rack and 13 single space racks). The locations for these bike racks are not indicated. Please provide bike rack locations.	7/16/2020	a propsoed bike pad/rack location is provided on the plans as required
22	22	CD	Civil	Civil Utility Docs	There is a new gas line shown entering the building. The civil drawings show this line coming out of the building and stopping at the 8" water line. What is the gas line routing? Where does this gas line tie into?	7/16/2020	the Civil Drawings show the connection location to at the building, please refence the MEP Plans for propsoed gas main routing
23	33	CD	Civil	CC-01	CC-01 Plan Index states that there is a Fire Marshal Record Type Plan (FM-01 to FM-02) and Lighting Plan (no drawing number given). These drawings do not currently exist in the civil document plans. Please provide.	7/16/2020	a Fire Marshal plan and Lighting Plan are now provided. The Lighting palns provided are for agency review. see Furlow Plans for lighting specifications
24	05	CD	Structural	051200	Can the AISC Certification for Steel Erection be waived on this project?	7/16/2020	Yes
25	32	CD	Architectural	116800	The playground protective surfacing is not specified or shown on the drawings. What type of playground protective surfacing is required?		
26	32	CD	Architectural	A12.1	Playground alternate 7A and 7B: Should the contractor list the full cost of the alternate playground as shown on A12.1 on the bid form or should the alternate be listed as an add/deduct from the base bid?	7/16/2020	The alternate should be shown as an add to the base bid. For example, if the alternate 7A design were to be accepted, your contract would be the your base bid plus the cost of alternate 7A.
27	32	CD	Architectural	A12.1	Could you provide a drawing scale for the playground drawings on A12.1?	7/16/2020	Scale: 3/32" = 1'-0"
28	32	CD	Architectural	116800	Please let me know what color scheme you are looking for on this whether its more natural looking or primary colors.	7/16/2020	Color will selected be owner from manufacturers full line of colors.
29	12	CD	Architectural	123216 & 123661	Both 123216 & 123661 refer to section 090600 Color Legend for color selections. This section is not part of the bid docs.	7/16/2020	All schedules, including 090600 Color Legend, will be included as oart of an addendum.

30	09	CD	Architectural	Affidavit of Craft Training	The state of Delaware does not offer a certified apprenticeship for the certain trades, how are we to fill out this form?		If a bidder s trade or category of work does not have a state recognized/certified apprenticeship p rogram, bidder shall state as such on the Craft Training Compliance Affidavit in the space allotted for the contractor registration number. All bidders are still required to submit a completed Craft T raining Compliance Affidavit with their bid.
31	ALL	CD	N/A	N/A	Where are bids due?	7/16/2020	Bids are due at the Marion E. Proffitt Training Center 118 S 6th St, Odessa, DE 19730 at the loa ding dock by 2:00PM on July 23, 2020.
32	7	CD	Architectural		Please provide the metal panel specification section	7/16/2020	Specifications will be provided as part of an addendum.

SECTION 074000 – METAL SIDING PANELS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Architectural metal wall panels.

1.2 SUBMITTALS

A. Shop Drawings Submittals:

1. Manufacturer of the metal panel system shall provide complete shop drawings.
2. Shop drawings shall be submitted and returned as approved/approved as noted prior to the beginning of product production.

B. Product Data Submittals:

1. Submit manufacturer's detailed product literature including the system profile sheet, and system description including material base-sheet gauge, seam height, panel on-center, finish, and sealant as required.
2. Submit manufacturer's installation guidelines of the specified product.

C. Samples for Verification: Submit a sample of each type of wall panel profile and a color sample.

1. Color Selection Samples: For each finish product specified, supply manufacturer's standard color chart with a minimum of 32 standard colors.
2. Product Samples: For each product specified, provide a full width sample, associated clip (if required) and actual color chip of selected color.

1.3 QUALITY ASSURANCE

A. Manufacturer shall be a company specializing in Architectural Sheet Metal Products with at least twenty (20) years experience. Listing as a prequalified manufacturer does not release manufacturer from providing complete, current and acceptable test data for each performance, thermal, and wind load requirement specified for specific profile proposed.

B. Manufacturer shall operate a permanent, full-time, manufacturing facility where the metal panels are produced on fixed based multi-station roll forming machines that are included in the Underwriter's Laboratory field inspection services. These facilities shall be currently under inspection at least four times per year by Underwriter's Laboratory personnel to verify compliance with UL certification. Portable on-site roll formers may not be used unless panels exceed 90 feet (27.5 m) in length.

C. Qualification of Installers:

1. Competent and skilled sheet metal applicators familiar with Dimensional Metals Inc products, standard details and recommendations. Applicator shall have at least two year experience applying these types of materials with successful completion of projects with similar scope. Applicator shall be a manufacturer approved installer with company issued documentation for review.
2. Installers shall be thoroughly trained and experienced in the necessary crafts and completely familiar with and comply with the recommendations and details of the manufacturer and the "Architectural Sheet Metal Manual" published by SMACNA.
3. Installers shall follow the manufacturers' installation details without exception unless written authorization from the manufacturer and architect are provided on an installation detail revision. Detail revision authorization shall be made in advance of product installation.

D. Mock-Up:

1. The first 20 panels installed shall serve as a mock-up for A/E's approval of appearance. The sample area, when approved by A/E and Owner, shall become the project standard for appearance.
2. Construct mock-up of each product type to be installed as specified in this section.

1.4 PRE-INSTALLATION MEETINGS

A. Convene minimum two weeks prior to starting work of this section. Meeting is to be held at the Project Site.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver components to project site in manufacturer's unopened original containers.

B. Protect components during shipment, storage, handling and erection from mechanical abuse, stains, discoloration and corrosion.

C. Provide strippable plastic film on all painted surfaces between contact areas to prevent abrasion during shipping, storage and handling.

D. Store materials off the ground, providing for drainage, under protective cover which allows for air circulation and protection from foreign material contamination, mechanical damage, cement, lime, or other corrosive materials.

E. Handle materials to prevent damage to surfaces, edges and ends of panel components. Damaged material shall be rejected and removed from site.

F. Examine materials upon delivery to jobsite. Reject and remove physically damaged, stained or marred material from project site.

G. Stack material to prevent damage and allow for adequate ventilation and drainage.

1.6 PROJECT CONDITIONS

A. Determine that work of other trades will not hamper or conflict with necessary fabrication and storage requirements.

B. Field Measurements: Verify actual dimensions by field measurements prior to fabrication.

1.7 SEQUENCING

A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

B. Determine Work of other trades that penetrates the wall is coordinated by location, in place, and accepted prior to installation of wall panel system.

1.8 WARRANTY

A. Furnish manufacturer's Non-prorated Twenty Year Finish Warranty stating that the architectural fluorocarbon coating will:

1. Not crack, chip, peel or exhibit any other mechanical failure of paint to adhere to the substrate.
2. Not exhibit fading or color change in excess of five hunter delta E units as determined by ASTM D2244-79.
3. Not chalk in excess of a numerical rating of eight as determined by ASTM D4214-98.

PART 2 PRODUCTS

2.1 ARCHITECTURAL METAL WALL PANELS

A. Product: HORIZONTAL WALL PANEL HWP Series as manufactured by Dimensional Metals Inc.

1. Performance Testing:
   a. ASTM E 331: Water Penetration.
   b. ASTM E 283: Air Leakage Test
2. Exposed Panel Width: 12 inches (305 mm) panel coverage.
3. HWP12 Profile: HWPB12
4. Material/Finish: 22 Gauge Galvalume with DynaClad PVDF finish.
5. Color:
   a. Dimensional Metals Inc. Stone
   b. Dimensional Metals Inc. Dove Grey
   c. Stainless Steel clips as required.

B. Product: FLAT LOCK Series as manufactured by Dimensional Metals Inc.

1. Flat Lock Profile: Rectangular
2. Material/Finish: 22 Gauge Galvalume with Dynaclad PVDF finish.
3. Rectangle Size: A. 12 inches x 24 inches. B. 22 inches x 44 inches.
4. Color: A. Slate Blue 12” x 24” B. Musket Grey 22” x 44”.
5. Stainless steel Clips as required.

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine alignment and placement of building structure before proceeding with installation of preformed metal panels.

B. Examine substrates, areas and conditions, with installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. General Requirements:

1. Install panels and flashing in accordance with approved shop drawings and manufacturer's product data, within specified tolerances.
2. Isolate dissimilar metals, masonry and concrete from metal panel system.
3. Anchorage shall allow for thermal expansion and contraction without stress or elongation of panels, clips or anchors.

B. Preformed Metal Panels:

1. Fasten anchor clips with fasteners as recommended by the manufacturer as required to meet the performance criteria specified.
2. Install starter and edge trim before installing panels.
3. Remove strippable plastic film prior to installation of panels.
4. Protect installed panels and trim from damage caused by adjacent construction until completion of installation.
5. Remove and replace any panels or flashing components that are damaged beyond successful repair.

C. Flashing:

1. Comply with SMACNA "Architectural Sheet Metal Manual" recommendations for installation work where the manufacturer's approved shop drawings do not define a specific detail.
2. Conceal fasteners and expansion provisions wherever possible.

3.3 CLEANING

A. Clean exposed surfaces of work promptly after completion of installation. To prevent rust from staining the painted finish, immediately remove filings produced by drilling or cutting.

B. Clean panels in accordance with manufacturer's recommendations.

C. Touch up minor abrasions and scratches in finish with the manufacturer's supplied PVDF touch up paint.

D. Remove all scrap and construction debris from the site.

3.4 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION 074000

ROOM FINISH SCHEDULE - COLOR LEGEND

MATERIAL	MANUFACTURER	COLOR NUMBER	COLOR NAME	DESCRIPTION
CPT-1	TARKETT	00158	GEO TILE, BLUESTONE	18" X 18" TILE
CPT-2	SHAW CONTRACT	72596	CENTRAL LINE TILE, ISLAND YELLOW	9" X 36" TILE, ASHLAR INSTALLATION
CPT-3	SHAW CONTRACT	81485	COLOR FORM TILE, IMPLY	9" X 36" TILE, ASHLAR INSTALLATION
CPT-4	SHAW CONTRACT	81326	COLOR FORM TILE, HYPER GREEN	9" X 36" TILE, ASHLAR INSTALLATION
CPT-5	SHAW CONTRACT	81211	COLOR FORM TILE, GLOWING	9" X 36" TILE, ASHLAR INSTALLATION
CPT-6	SHAW CONTRACT	81855	COLOR FORM TILE, AURORA	9" X 36" TILE, ASHLAR INSTALLATION
VCT-1	ARMSTRONG	51810	WASHED LINEN	-
VCT-2	ARMSTRONG	51874	GRAYED BLUE	-
VCT-3	ARMSTRONG	51866	LITTLE GREEN APPLE	-
VCT-4	ARMSTRONG	51878	GOLDEN	-
VCT-5	ARMSTRONG	51816	CHERRY RED	-
SV-1	ARMSTRONG	H5532	GRAYED BLUE	
RB-1	JOHNSONITE	292	EVENING SHOWER	-
EP-1	SHERWIN WILLIAMS - GENERAL POLYMERS	320	CERAMIC CARPET, TACO RED	-
PT-1	CROSSVILLE	A1113	COLOR BLOX, BLUE SUEDE SHOES	6" X 6" TILE; UPS FINISH; GROUT COLOR #19 PEWTER BY CUSTOM BUILDING PRODUCTS
PTB-1	CROSSVILLE	A1113	COLOR BLOX, BLUE SUEDE SHOES	6" x 12" COVE BASE TILE; UPS FINISH; GROUT COLOR #19 PEWTER BY CUSTOM BUILDING PRODUCTS
PTD-1	SHERWIN WILLIAMS	SW7010	WHITE DUCK	-
PTD-2	SHERWIN WILLIAMS	SW6229	TEMPE STAR	-
PTD-3	SHERWIN WILLIAMS	SW9038	CUCUZZA VERDE	-
PTD-4	-----	-----	-----	NOT USED
PTD-5	SHERWIN WILLIAMS	SW6314	LUXURIOUS RED	-

ROOM FINISH SCHEDULE - COLOR LEGEND

MATERIAL	MANUFACTURER	COLOR NUMBER	COLOR NAME	DESCRIPTION
PTD-6	SHERWIN WILLIAMS	SW7657	TINSMITH	
WP-1	CS ACROVYN	372	CHAMELEON COLLECTION, CLASSIC MAPLE	INSTALL FOR WOOD GRAIN PATTERN TO RUN VERTICALLY. CAULK VERTICAL SEAMS. PROVIDE WAINSCOT TRIM BY MANUFACTURER IN TOILET ROOMS. ALT BID. NO. 4: PROVIDE WOOD WAINSCOT TRIM IN CORRIDORS - SEE DETAIL ON DRAWINGS.
CT-1	AMERICAN OLEAN	0087	MATTE, ALMOND	6" X 6" TILE AND 6" X 6" BULLNOSE TOP COURSE AT WAINSCOT, GROUT COLOR #10 ANTIQUE WHITE BY CUSTOM BUILDING PRODUCTS (CBP)
CT-2	AMERICAN OLEAN	85	MATTE, BIMINI BLUE	6" X 6" TILE, GROUT COLOR #10 ANTIQUE WHITE BY CBP
CT-3	AMERICAN OLEAN	Q076	BRIGHT, GREEN APPLE	6" X 6" TILE, GROUT COLOR #10 ANTIQUE WHITE BY CBP
CT-4	DALTILE	1012	COLOR WHEEL CLASSIC, MUSTARD	6" X 6" TILE, GROUT COLOR #10 ANTIQUE WHITE BY CBP
CT-5	AMERICAN OLEAN	Q072	BRIGHT, POMEGRANATE	6" X 6" TILE, GROUT COLOR #10 ANTIQUE WHITE BY CBP
AP-1	GUILFORD OF MAINE	797	FR701 2100, SUNSHINE	ACOUSTICAL WALL ABSORBER PANEL FABRIC
CG-1	CS ACROVYN	934	PEARL	CORNER GUARDS, TYPICAL UNLESS NOTED OTHERWISE
CG-2	CS ACROVYN	372	CLASSIC MAPLE	CORNER GUARDS WHERE WP-1 OCCURS
PL-1	WILSONART	7909-60	FUSION MAPLE	3MM MATCHING EDGE BAND
PL-2	WILSONART	4990-38	FLAX LINEN	3MM EDGE BAND #2422 GREY BY DOELLKEN WOODTAPE
SS-1	CORIAN	---	AQUALITE	COUNTERTOPS IN RECEPTION

ROOM FINISH SCHEDULE - COLOR LEGEND

MATERIAL	MANUFACTURER	COLOR NUMBER	COLOR NAME	DESCRIPTION
SS-2	CORIAN	---	CONCRETE	WINDOW STOOLS
ACT-1	ARMSTRONG	1714	WHITE	2' X 4' FINE FISSURED HIGH NRC, SQUARE LAY-IN PANELS
ACT-2	ARMSTRONG	1729	WHITE	2' X 4' FINE FISSURED, SQUARE LAY-IN PANELS
ACT-3	ARMSTRONG	1728	WHITE	2' X 2' FINE FISSURED, SQUARE LAY-IN PANELS
ACT-4	NUDO	---	WHITE	2' X 4' SQUARE LAY-IN PANELS
---	CLARDIGE	KL490	RECTORY	VINYL ON TACK BOARDS AND EXHIBIT RAILS
---	CS ACROVYN	372	CLASSIC MAPLE	CORNER GUARDS WHERE WP-1 OCCURS
---	CS ACROVYN	934	PEARL	CORNER GUARDS, TYPICAL UNLESS NOTED OTHERWISE
---	MOMENTUM TEXTILES	---	ELON, RAINTREE	CUBICLE/PRIVACY CURTAINS
---	INTERFACE FABRIC	481	PANEL 2100, FR701, PEARL	TACKABLE WALL PANELS
---	MECHOSHADE	1520	1500 SERIES, SHADOW GREY	BASE BID: WINDOW SHADE FABRIC TYPICAL AT EXTERIOR WINDOW TYPES W1, W2, W3, AND W4 AND TYPICAL AT ALUMINUM FRAME TYPES AL4 AND AL6 ALT. BID NO. 1: TYP. AT WINDOW TYPE W3 ALT. BID NO. 2: TYP. AT WINDOW TYPE W3 ALT. BID NO. 3: TYP. AT WINDOW TYPE W3
---	MODERNFOLD	290 (H)	HARBORWEAVE II, ROCKPORT	VINYL ON FOLDING PARTITIONS WITH SMOKE GRAY FRAME
---	MODERNFOLD/ WILSONART	4990-38	FLAX LINEN	LAMINATE ON LOWER PORTION OF FOLDING PARTITION WITH SMOKE GRAY FRAME
---	PENCO	12	TAWNY TAN	METAL LOCKERS
---	PERFORMANCE SPORTS SYSTEMS	W04	NAVY BLUE	WALL PADDING
---	SCRANTON PRODUCTS	---	LINEN	PLASTIC TOILET PARTITIONS
---	VT INDUSTRIES	CL07	CLEAR ON RED OAK	TYPICAL DOOR STAIN

ABBREVIATIONS:

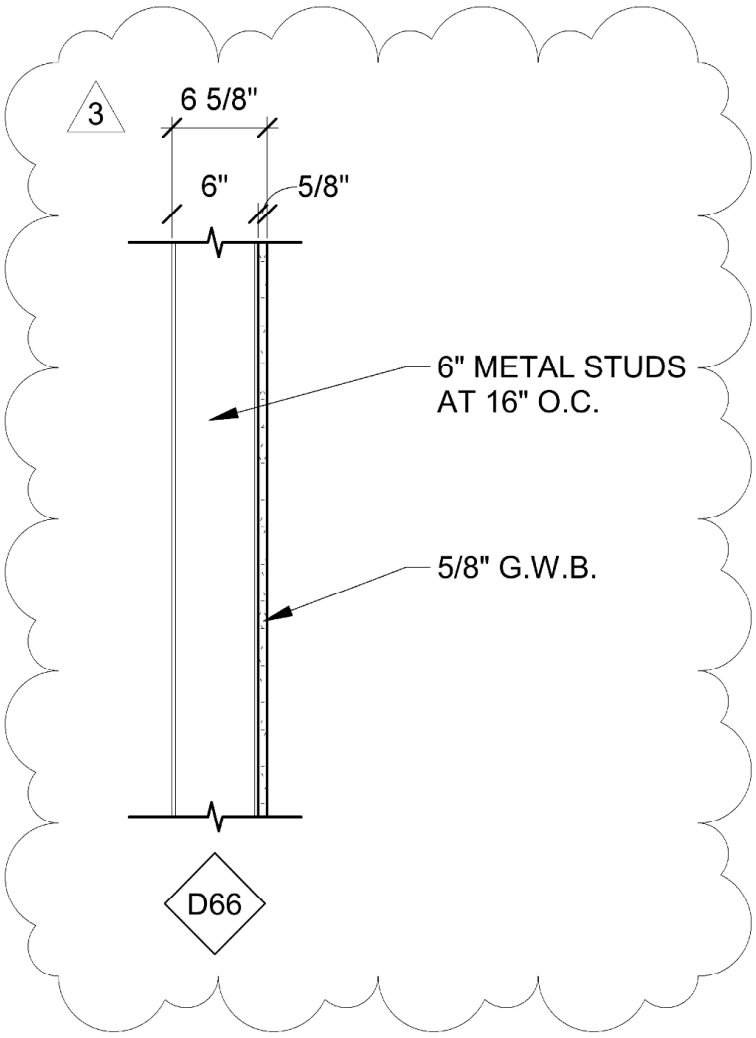
AP	ACOUSTICAL PANEL	PTB	PORCELAIN TILE BASE
CPT	CARPET TILE	PTD	PAINT
CG	CORNER GUARD	RB	RUBBER BASE
CT	CERAMIC TILE	S CONC	SEALED CONCRETE
EP	EPOXY RESINOUS FLOORING	SS	SOLID SURFACING
PL	PLASTIC LAMINATE	VCT	VINYL COMPOSITION TILE
PT	PORCELAIN TILE	WP	PROTECTIVE WALLCOVERING

SPECIALTIES SCHEDULE - INSTRUCTIONAL BOARDS

ITEM NO.	MANUFAC. OR SUPPLIER	MANUF. NO.	TYPE	SIZE (W X H)	REMARKS
MB1	CLARIDGE	SERIES 4	TYPE "A" MARKER BOARD WITH MAP RAIL	6' X 4'	
MB2	CLARIDGE	SERIES 4	TYPE "A" MARKER BOARD WITH MAP RAIL	6' X 6'	
MB3	CLARIDGE	SERIES 4	TYPE "A" MARKER BOARD WITH MAP RAIL	8' X 4'	
MB4	CLARIDGE	SERIES 4	TYPE "BL" WITH MAP RAIL - WITH 3' WIDE X 4' HIGH TACK BOARD ON RIGHT AND 3' WIDE X 4' HIGH MARKER BOARD ON LEFT	6' X 4'	
MB5	CLARIDGE	SERIES 4	TYPE "BL" WITH MAP RAIL - WITH 4' WIDE X 6' HIGH TACK BOARD ON RIGHT AND 6' WIDE X 6' HIGH MARKER BOARD ON LEFT	10' X 6'	
MB6	CLARIDGE	SERIES 4	TYPE "BR" WITH MAP RAIL - WITH 3' WIDE X 4' HIGH MARKER BOARD ON RIGHT AND 3' WIDE X 4' HIGH TACK BOARD ON LEFT	6' X 4'	
MB7	CLARIDGE	SERIES 4	TYPE "BR" WITH MAP RAIL - WITH 6' WIDE X 6' HIGH MARKER BOARD ON RIGHT AND 4' WIDE X 6' HIGH TACK BOARD ON LEFT	10' X 6'	
TB1	CLARIDGE	SERIES 4	TYPE "CO" TACK BOARD	3' X 4'	
TB2	CLARIDGE	SERIES 4	TYPE "CO" TACK BOARD	4' X 4'	
TB3	CLARIDGE	SERIES 4	TYPE "CO" TACK BOARD	6' X 4'	
TB4	CLARIDGE	SERIES 4	TYPE "CO" TACK BOARD	6' X 6'	
TS06	CLARIDGE	EDR	TWO EXHIBIT RAILS	6' X 3"	TWO RAILS AT EACH LOCATION, ONE MOUNTED AT 5'-0" A.F.F. TO BOTTOM AND ONE MOUNTED AT 6'-6" A.F.F. TO BOTTOM
TS10	CLARIDGE	EDR	TWO EXHIBIT RAILS	10' X 3"	
TS14	CLARIDGE	EDR	TWO EXHIBIT RAILS	14' X 3"	
TS16	CLARIDGE	EDR	TWO EXHIBIT RAILS	16' X 3"	

PLASTIC LAMINATE CASEWORK SCHEDULE

ITEM NO.	MANUF.	MANUF. NO. TO BE MODIFIED	DESCRIPTION	SIZE (INCHES)			REMARKS
				W	H	D	
MODIFIED AND CUSTOM CABINETS							
4001	TMI	K2032	COMBINATION TALL WARDROBE CABINET ABOVE: DOUBLE DOORS AND ONE ADJUSTABLE SHELF BELOW: OPEN WITH TWO HORIZONTAL DIVIDERS AND TWO VERTICAL DIVIDERS TO CREATE FOUR EQUAL CUBES ABOVE AN OPEN AREA FOR COATS. TWO DOUBLE COAT HOOKS ON BACK PANEL. ONE DOUBLE COAT HOOK ON LEFT END PANEL. ONE DOUBLE COAT HOOK ON RIGHT END PANEL.	36	90	18	SEE DETAIL ON DRAWINGS
4002	TMI	W1000	OPEN MAILBOX UNIT WITH TWO VERTICAL DIVIDERS SPACED EQUALLY AND 1/2" FIXED HORIZONTAL SHELVES SPACED EQUALLY TO PROVIDE A TOTAL OF (36) 3 1/2" HIGH COMPARTMENTS WITH A LABEL HOLDER AT EACH OPENING (TOTAL OF 36).	36	48	13	-

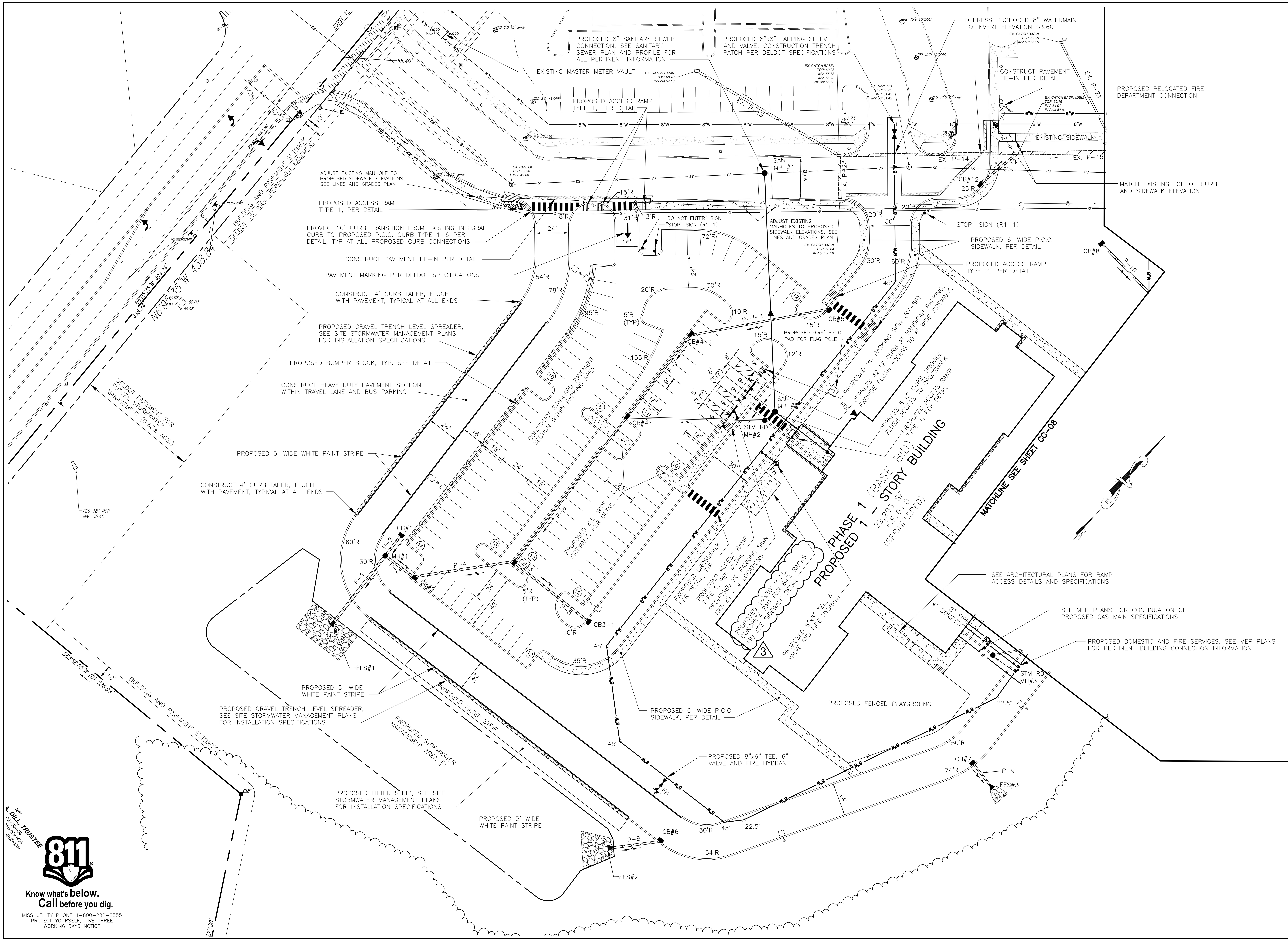


gilbert Architects Inc.

BRICK MILL EARLY CHILDHOOD CENTER

ADDITIONAL PARTITION TYPE D66
NOT TO SCALE

ADDENDUM NO. 3	
DATE 07/16/2020	SK-A-001
GAI PROJECT NO. 2001	
DRAWN BY JCB	REF. DWG. A3.0



PROPOSED 8" SANITARY SEWER CONNECTION, SEE SANITARY SEWER PLAN AND PROFILE FOR ALL PERTINENT INFORMATION
PROPOSED 8"x8" TAPPING SLEEVE AND VALVE. CONSTRUCTION TRENCH PATCH PER DELDOT SPECIFICATIONS
DEPRESS PROPOSED 8" WATERMAIN TO INVERT ELEVATION 53.60
EXISTING MASTER METER VAULT
CONSTRUCT PAVEMENT TIE-IN PER DETAIL
PROPOSED RELOCATED FIRE DEPARTMENT CONNECTION
PROPOSED ACCESS RAMP TYPE 1, PER DETAIL
EXISTING SIDEWALK
ADJUST EXISTING MANHOLE TO PROPOSED SIDEWALK ELEVATIONS, SEE LINES AND GRADES PLAN
MATCH EXISTING TOP OF CURB AND SIDEWALK ELEVATION
PROPOSED ACCESS RAMP TYPE 1, PER DETAIL
PROVIDE 10' CURB TRANSITION FROM EXISTING INTEGRAL CURB TO PROPOSED P.C.C. CURB TYPE 1-6 PER DETAIL, TYP AT ALL PROPOSED CURB CONNECTIONS
"DO NOT ENTER" SIGN
"STOP" SIGN (R1-1)
ADJUST EXISTING MANHOLES TO PROPOSED SIDEWALK ELEVATIONS, SEE LINES AND GRADES PLAN
"STOP" SIGN (R1-1)
PROPOSED 6' WIDE P.C.C. SIDEWALK, PER DETAIL
CONSTRUCT PAVEMENT TIE-IN PER DETAIL
PAVEMENT MARKING PER DELDOT SPECIFICATIONS
PROPOSED ACCESS RAMP TYPE 2, PER DETAIL
CONSTRUCT 4' CURB TAPER, FLUCH WITH PAVEMENT, TYPICAL AT ALL ENDS
PROPOSED GRAVEL TRENCH LEVEL SPREADER, SEE SITE STORMWATER MANAGEMENT PLANS FOR INSTALLATION SPECIFICATIONS
PROPOSED BUMPER BLOCK, TYP. SEE DETAIL
CONSTRUCT HEAVY DUTY PAVEMENT SECTION WITHIN TRAVEL LANE AND BUS PARKING
PROPOSED 6'x6' P.C.C. PAD FOR FLAG POLE
PROPOSED HC PARKING SIGN (R7-8P)
DEPRESS 42 LF CURB AT HANDICAP PARKING, PROVIDE FLUSH ACCESS TO 6' WIDE SIDEWALK.
DEPRESS 8 LF CURB, PROVIDE FLUSH ACCESS TO CROSSWALK.
PROPOSED ACCESS RAMP TYPE 1, PER DETAIL
DELDOT EASEMENT FOR FUTURE STORMWATER MANAGEMENT (0.63± ACS.)
BUILDING AND PAVEMENT SETBACK
DELDOT 15' WIDE PERMANENT EASEMENT
N6°05'35"W 438.84'
CONSTRUCT STANDARD PAVEMENT SECTION WITHIN PARKING AREA
PROPOSED 8.5' WIDE P.C.C. SIDEWALK, PER DETAIL
PROPOSED 5' WIDE WHITE PAINT STRIPE
CONSTRUCT 4' CURB TAPER, FLUCH WITH PAVEMENT, TYPICAL AT ALL ENDS
PHASE 1 (BASE BID)
PROPOSED 1 - STORY BUILDING
29,295 SF
F.F. 61.0
(SPRINKLERED)
MATCHLINE SEE SHEET CC-08
PROPOSED CROSSWALK PER DETAIL, TYP.
PROPOSED ACCESS RAMP TYPE 1, PER DETAIL
PROPOSED HC PARKING SIGN (R7-8) 4 LOCATIONS
PROPOSED 14'x30' P.C.C. CONCRETE PAD FOR BIKE RACKS (9) SEE SIDEWALK DETAIL
PROPOSED 8"x6" TEE, 6" VALVE AND FIRE HYDRANT
SEE ARCHITECTURAL PLANS FOR RAMP ACCESS DETAILS AND SPECIFICATIONS
SEE MEP PLANS FOR CONTINUATION OF PROPOSED GAS MAIN SPECIFICATIONS
PROPOSED DOMESTIC AND FIRE SERVICES, SEE MEP PLANS FOR PERTINENT BUILDING CONNECTION INFORMATION
STM RD MH#3
PROPOSED FENCED PLAYGROUND
PROPOSED 5" WIDE WHITE PAINT STRIPE
PROPOSED GRAVEL TRENCH LEVEL SPREADER, SEE SITE STORMWATER MANAGEMENT PLANS FOR INSTALLATION SPECIFICATIONS
PROPOSED 6' WIDE P.C.C. SIDEWALK, PER DETAIL
PROPOSED 8"x6" TEE, 6" VALVE AND FIRE HYDRANT
PROPOSED FILTER STRIP
PROPOSED STORMWATER MANAGEMENT AREA #1
PROPOSED FILTER STRIP, SEE SITE STORMWATER MANAGEMENT PLANS FOR INSTALLATION SPECIFICATIONS
PROPOSED 5' WIDE WHITE PAINT STRIPE
FES#1
FES#2
FES#3
S83°58'05"W (D) 286.96'
BUILDING AND PAVEMENT SETBACK
N/F A. DILL, TRUSTEE
811
Know what's below. Call before you dig.
MISS UTILITY PHONE 1-800-282-8555 PROTECT YOURSELF, GIVE THREE WORKING DAYS NOTICE

REVISIONS	CHECKED
1. REV PER DUFFIELD 5-28-2020 COMMENTS	06/05/20 MKB
2. REV PER DUFFIELD 6-23-2020 COMMENTS	07/06/20 MKB
3. ADDENDUM #3	07/16/20 MKB

PHASE 1
SITE LAYOUT AND UTILITY PLAN

BRICK MILL EARLY CHILDHOOD CENTER

MIDDLETOWN HUNDRED - NEW CASTLE COUNTY, DELAWARE

OWNER
APPOQUINIMINK SCHOOL DISTRICT
118 S. SIXTH ST., P.O. BOX 4010
ODESSA, DE 19730
302-376-4014

TOWN OF MIDDLETOWN APPROVAL BLOCK

200 CONTINENTAL DRIVE
SUITE 400
NEWARK, DE 19713
PHONE (302) 323-9377
FAX (302) 323-9461
WWW.LANDMARK-SE.COM
INFO @ LANDMARK-SE.COM

201 RESEARCH BLVD.
SUITE 140
ABERDEEN, MD 21001
PHONE (410) 939-2144
FAX (302) 323-9461
INFOMD @ LANDMARK-SE.COM

Landmark Science & Engineering

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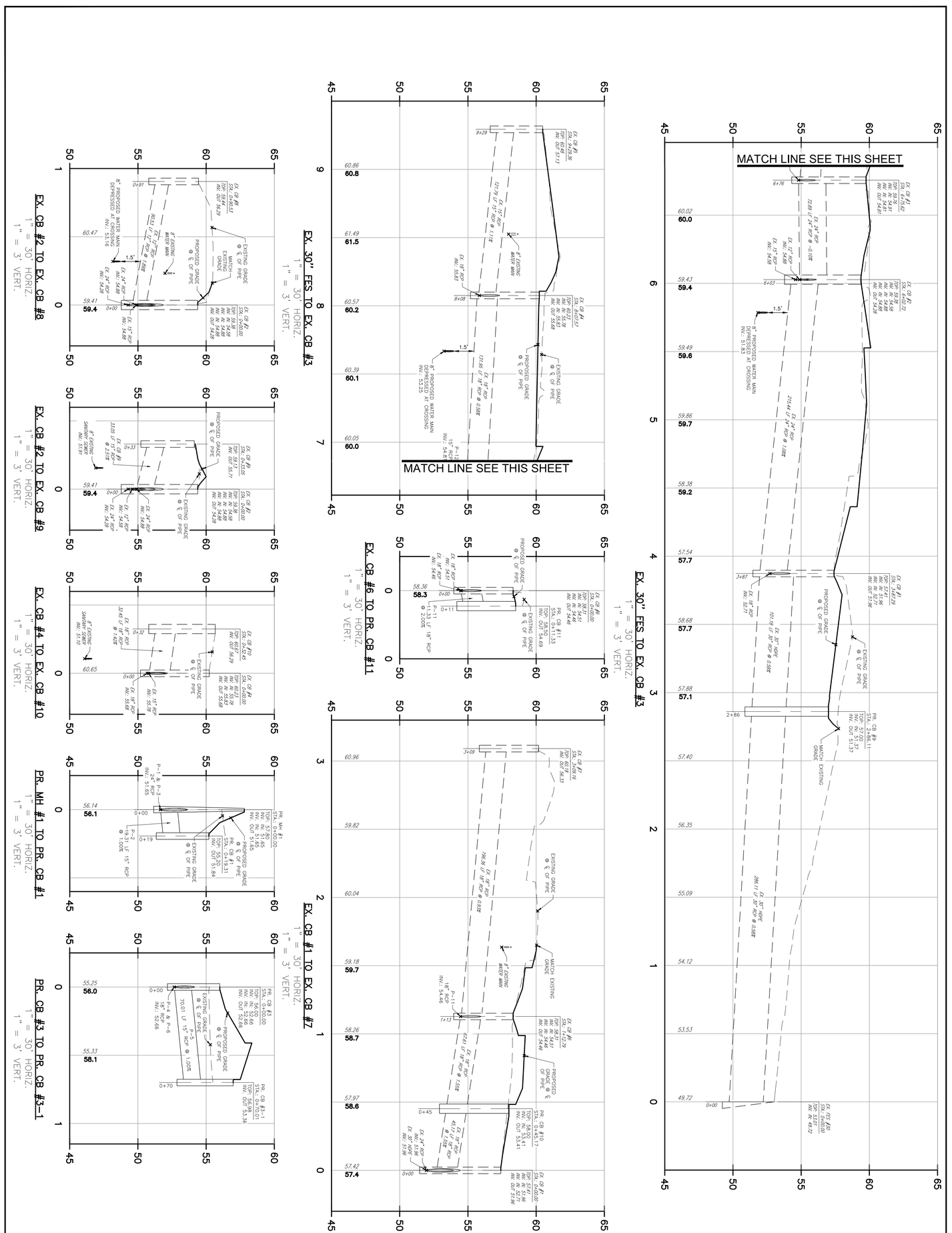
DESIGN BY: MKB | DATE: 05/01/2020
CHECK BY: TGW | SHEET: CC-07 of 38

GRAPHIC SCALE 0 15 30 60

COMMISSION: C2891-1

CC-07

FILE NAME: LAYOUT.dwg



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DESIGN BY: MKB	DATE: 5/01/2020		
CHECK BY: TCW	SHEET: CC-17 of 23		
0 15 30 60 GRAPHIC SCALE		THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.	
CC-17	COMMISSION: C2891-1	ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND THE RULES AND REGULATIONS THERETO APPURTENANT	REVISIONS / CHECKED BY
FILE NAME: C2891 STORM SET.dwg			

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OWNER
APPOQUINIMINK SCHOOL DISTRICT
118 S. SIXTH ST., P.O. BOX 4010
ODESSA, DE 19730
302-376-4014

DRAWN BY: MKB
PROJECT NO.: 2001
SHEET NO.: CC-17
DATE: 06/23/2020

AGENCY NAME
AGENCY PROJ #
REV# REVISION DATE

STORM DRAINAGE PROFILES
THE NEW:
BRICK MILL EARLY CHILDHOOD CENTER
APPOQUINIMINK SCHOOL DISTRICT
NEW CASTLE COUNTY, DELAWARE

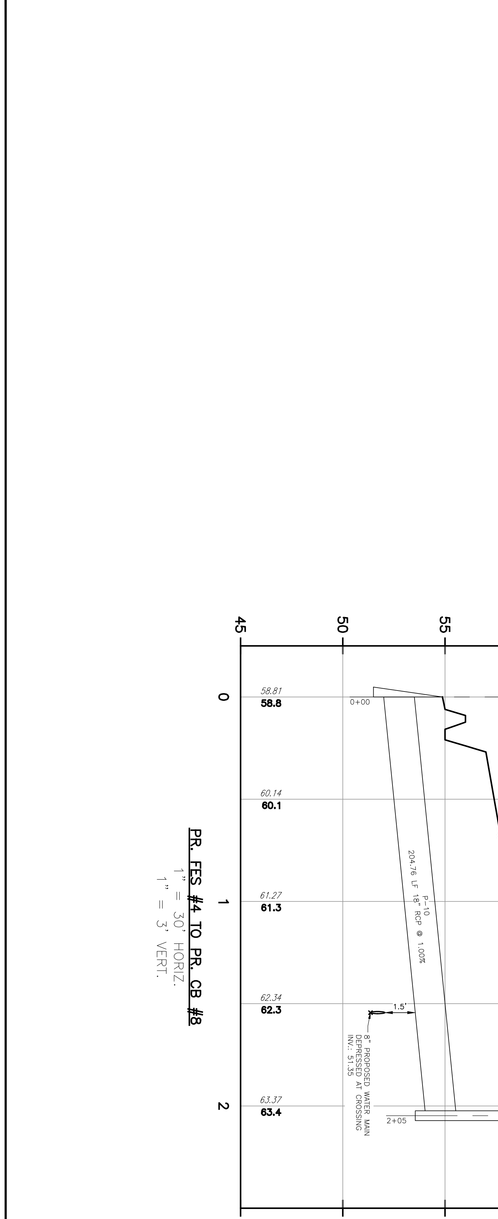
gilbert Architects Inc.

626 North Charlotte Street
Lancaster, PA17603
P: 717.291.1077 F: 717.392.3923

29L Atlantic Avenue
Ocean View, DE 19970
P: 302.449.2492 F: 302.449.2493

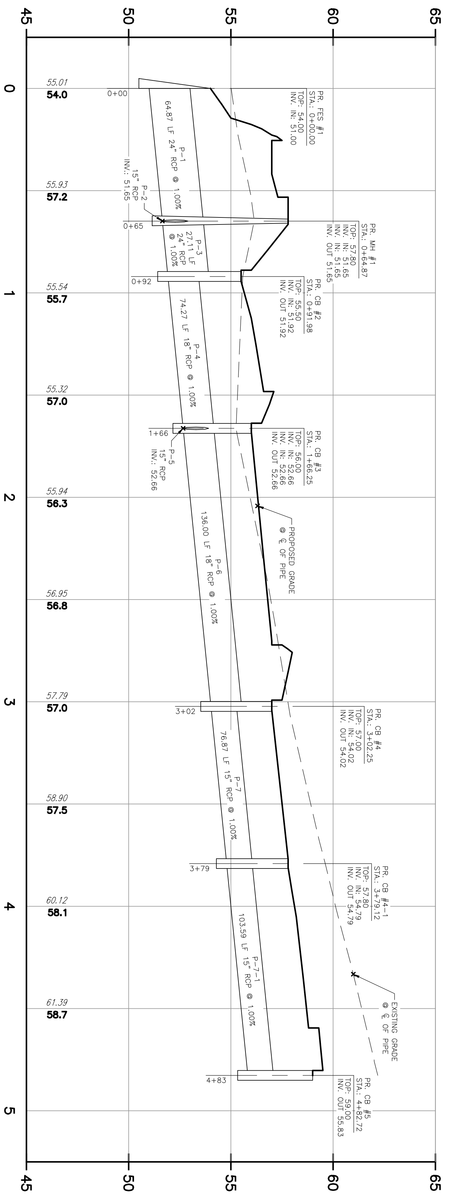
10451 Mill Run Circle , Suite 400
Owings Mills, MD 21117
P: 410.356.8856 F: 410.654.8802

BID DOCUMENTS



PR. FES #3 TO PR. CB #7
1" = 30' HORIZ.
1" = 3' VERT.

EX. CB #3 TO PR. CB #12
1" = 30' HORIZ.
1" = 3' VERT.



PR. FES #1 TO PR. CB #5
1" = 30' HORIZ.
1" = 3' VERT.

PR. FES #4 TO PR. CB #6
1" = 30' HORIZ.
1" = 3' VERT.

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DESIGN BY: MKB	DATE: 5/01/2020					
CHECK BY: TCW	SHEET: CC-18 of 23					
0 15 30 60 GRAPHIC SCALE		THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.				
CC-18	COMMISSION: C2891-1	ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OSHA STANDARDS AND HEALTH ACT OF 1970 AS WELL AS THE RULES AND REGULATIONS THERETO APPURTENANT				
FILE NAME: C2891 STORM SET.dwg						

DATE 06/23/2020	SHEET NO. CC-18	DRAWN BY MKB	AGENCY NAME / AGENCY PROJ # / REV# / REVISION DATE	PHASE 1 - LINES AND GRADES PLAN THE NEW: BRICK MILL EARLY CHILDHOOD CENTER APPOQUINIMINK SCHOOL DISTRICT NEW CASTLE COUNTY, DELAWARE	gilbert Architects Inc.	626 North Charlotte Street Lancaster, PA17603 P: 717.291.1077 F: 717.392.3923 296, Atlantic Avenue Ocean View, DE 19970 P: 302.449.2492 F: 302.449.2493 10451 Mill Run Circle , Suite 400 Owings Mills, MD 21117 P: 410.356.8856 F: 410.654.8802	BID DOCUMENTS

NARRATIVE

I. GENERAL

THE APPOQUINIMINK SCHOOL DISTRICT PROPOSED TO DEVELOP THIS 24.81± ACRE PARCEL LOCATED ON THE EAST OF THE INTERSECTION OF BRICK MILL ROAD AND AND DOVE RUN BOULEVARD IN THE TOWN OF MIDDLETOWN, APPOQUINIMINK HUNDRED, NEW CASTLE COUNTY, DELAWARE. THE PURPOSES OF THIS PLAN IS TO CONSTRUCT A NEW ONE-STORY EARLY CHILDHOOD CENTER WITH ALL ITS AMENITIES, INCLUDING BUS AND PASSENGER VEHICLE PARKING. THE ENTRANCE WILL BE FROM THE EXISTING ACCESS TO THE BRICK MILL ELEMENTARY SCHOOL FROM BRICK MILL ROAD. THE TWO STORMWATER MANAGEMENT INFILTRATION BASINS PONDS WILL BE CONSTRUCTD USING THE MOST CURRENT STORMWATER BEST MANAGEMENT PRACTICES (SWBMP).

PROPOSED BUILDING CONSTRUCTION WILL BE COMPLETED IN 4 PHASES.

STORMWATER QUALITY AND QUANTITY MANAGEMENT IS PROPOSED TO BE PROVIDED BY THE CONSTRUCTION OF TWO ON-SITE SWBMP FACILITIES. ALL FACILITIES HAVE BEEN DESIGNED IN ACCORDANCE WITH THE CURRENT DELAWARE SEDIMENT AND STORMWATER REGULATIONS AND NO WAIVERS ARE BEING REQUESTED.

SOILS ON THE ENTIRE SITE ARE MAPPED AS PRIMARILY REYBOLD SILT LOAM, 2 TO 5 PERCENT SLOPES, (ReB) WITH A PORTION OF SASSAFRAS SANDY LOAM, (SaE) 15 TO 25 PERCENT SLOPES TO THE SOUTH AND EAST. BOTH SOILS ARE CLASSIFIED AS HYDROLOGICAL SOIL GROUP B..

II. TEMPORARY SEDIMENTATION AND EROSION CONTROL MEASURES:

A. SILT FENCE: A TEMPORARY BARRIER OF GEOTEXTILE FABRIC (FILTER CLOTH) USED TO INTERCEPT SEDIMENT LADEN RUNOFF FROM SMALL DRAINAGE AREAS OF DISTURBED SOIL. THIS STRUCTURE WILL FILTER RUNOFF CARRYING THE SEDIMENT, RETAIN THE SEDIMENT, AND ALLOW THE FILTERED RUNOFF TO PASS.

B. STABILIZED CONSTRUCTION ENTRANCE: THIS CRUSHED STONE MAT PREVENTS THE "TRACKING" OR FLOWING OF SEDIMENT OFF-SITE ONTO THE EXISTING ROADWAY.

C. STORM DRAIN INLET PROTECTION TYPE 1: THIS SEDIMENT CONTROL DEVICE CONSISTS OF A FRAMEWORK OF 2 x 4'S WITH SILT FENCE PLACED AROUND THE TOP OF A CATCH BASIN.

D. INLET PROTECTION TYPE 2: THIS SEDIMENT CONTROL DEVICE CONSISTS OF A GEOTEXTILE FABRIC POUCH INSERTED INTO A CATCH BASIN FOR THE PURPOSE OF CAPTURING SEDIMENT AS IT ENTERS THE CATCH BASIN.

E. SEDIMENT TRAP: AN EXCAVATION OR COMBINATION OF EXCAVATION AND EMBANKMENT AREA, APPROPRIATELY SIZED FOR SMALLER WATERSHEDS, WHICH TRAPS SEDIMENT LADEN RUNOFF AND PROVIDES TIME FOR SEDIMENT PARTICLES TO SETTLE OUT PRIOR TO DISCHARGE TO A RECEIVING OUTLET.

F. STABILIZATION MATTING: STRAW OR CURLED WOOD MATTING PLACED AFTER FINE GRADING AND SEEDING (TEMPORARY OR PERMANENT) ON ALL SLOPES 3:1 OR STEEPER AND ALL OPEN CHANNELS.

G. COMPOST FILTER LOG: THIS SEDIMENT CONTROL DEVICE CONSISTS OF A THREE-DIMENSIONAL TUBULAR FILTER SOCK THAT IS FILLED WITH COMPOST MEDIA TO INTERCEPT SEDIMENT LADEN RUNOFF FROM SMALL DRAINAGE AREAS OF DISTURBED SOILS WHILE ALLOWING THE FILTERED RUNOFF TO PASS THROUGH.

H. TEMPORARY BERM: CONSISTS OF MOUNDING EARTHEN MATERIALS OR A COMBINATION OF MOUNDING AND DITCHING EARTHEN MATERIALS, TO CONVEY SEDIMENT LADEN RUNOFF INTO A SEDIMENT TRAP OR SEDIMENT BASIN.

III. VEGETATIVE PRACTICES - TEMPORARY AND PERMANENT

A. AREAS DESIGNATED TO BE TEMPORARILY STABILIZED SHALL BE SEEDED WITH THE FOLLOWING SEED MIXTURE:
(MIX #5 FROM DESCH TEMPORARY SEEDING SPEC.)
ANNUAL RYEGRASS APPLIED AT THE RATE OF 125 LBS. PER ACRE.

B. AREAS DESIGNATED TO BE PERMANENTLY STABILIZED SHALL BE SEEDED WITH THE FOLLOWING SEED MIXTURE:
(MIX #7 FROM DESCH PERMANENT SEEDING SPEC.) OR THEY MAY RECEIVE SOD AS DIRECTED BY THE OWNER.

TALL FESCUE	80%
KENTUCKY BLUEGRASS BLEND	10%
PERENNIAL RYEGRASS	10%

(% BY WEIGHT TOTAL MIXTURE)

C. SEED APPLICATION RATE: 190 LBS. PER ACRE

D. FERTILIZATION: FERTILIZER SHALL BE THE FOLLOWING FORMULATION AND APPLIED AT THE FOLLOWING RATE:
10-10-10: 250 LBS PER ACRE (FORMULATION AND RATES MAY BE MODIFIED BASED ON SOIL TEST RECOMMENDATIONS IN GEOTECH REPORT).

E. STRAW MULCH SHALL BE APPLIED IN ACCORDANCE WITH DNREC STANDARD AND SPECIFICATIONS FOR MULCHING DE-ESC-3.4.5.

F. LIME-APPLY DOLOMITIC LIMESTONE AT 2 TONS PER ACRE.

G. SEEDBED PREPARATION:
IT IS IMPORTANT TO PREPARE A GOOD SEEDBED PRIOR TO ESTABLISHING VEGETATION. THE SEEDBED SHOULD BE WELL PREPARED, LOOSE TOPSOIL, FREE OF SIZEABLE ROCKS, DEBRIS, PETRIFIED WOOD ETC.

PRIOR TO APPLYING PERMANENT SEEDING:
ALL PERVIOUS AREAS WITHIN DISTURBED AREAS SHALL BE DEEP-TILLED TO PROMOTE PASSIVE INFILTRATION OF STORMWATER RUNOFF.

THE SOIL SURFACE SHOULD NOT BE COMPACTED OR CRUSTED OVER WHEN SEED AND MULCH IS APPLIED.

H. APPLY SEED UNIFORMLY WITH A BROADCAST SEEDER, DRILL, CULTIPACKER SEEDER OR HYDROSEEDER. ALL SEED WILL BE APPLIED AT THE RECOMMENDED RATE AND PLANTING DEPTH.

I. SEED THAT HAS BEEN BROADCAST SHOULD BE COVERED BY RAKING OR DRAGGING AND THEN LIGHTLY TAMPED INTO PLACE USING A ROLLER OR CULTIPACKER. IF HYDROSEEDING IS USED AND THE SEED AND FERTILIZER IS MIXED, THEY WILL BE MIXED ON SITE AND THE SEEDING SHALL BE DONE IMMEDIATELY AND WITHOUT INTERRUPTION.

J. MULCHING TO BE DONE IN ACCORDANCE WITH DNREC STANDARD DETAIL.

K. CONTRACTOR IS RESPONSIBLE FOR WATERING SEEDED AREAS AS NECESSARY TO ACHIEVE THE REQUIRED VEGETATIVE STABILIZATION UNTIL THE SITE WORK IS COMPLETE AND ACCEPTED BY THE OWNER.

L. THE CONTRACTOR IS REQUIRED TO KEEP ALL SEED TICKETS AND PROVIDE TO CCR FOR SUBMITTAL TO DNREC FOR FINAL APPROVAL OF STORMWATER AS-BUILT PLANS.

MISS UTILITY PHONE 1-800-257-7777
PROTECT YOURSELF, GIVE THREE
WORKING DAYS NOTICE

THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.

ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND THE RULES AND REGULATIONS THERETO APPURTENANT

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IV. SEQUENCE OF CONSTRUCTION

A. SCHEDULE AND ATTEND A PRE-CONSTRUCTION MEETING WITH THE DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL (DNREC), THE DEVELOPER, THE CCR, THE SITE CONTRACTOR AND THE CIVIL ENGINEER. A CERTIFIED CONSTRUCTION REVIEWER (CCR) WILL BE REQUIRED. NOTIFY DNREC AND CCR AT LEAST 48 HOURS PRIOR TO THE START OF ANY CONSTRUCTION ITEM THAT WILL REQUIRE THEIR INSPECTION.

B. THE DNREC SEDIMENT AND STORMWATER PROGRAM MUST BE NOTIFIED IN WRITING FIVE (5) DAYS PRIOR TO COMMENCING WITH CONSTRUCTION. FAILURE TO DO SO CONSTITUTES A VIOLATION OF THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLAN.

C. INSTALL PERIMETER CONTROLS AS SHOWN ON THE PRE-CONSTRUCTION SITE STORMWATER MANAGEMENT PLAN. ONLY THOSE AREAS WHERE THESE CONTROLS ARE INITIALLY INSTALLED SHALL BE DISTURBED.

THE CONTROL MEASURES ARE AS FOLLOWS:

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE.
2. INSTALL CHAIN LINK FENCE.
3. INSTALL SILT FENCE AS SHOWN.
4. INSTALL INLET PROTECTIONS, AS NEEDED.
5. STRIP AREA FOR STOCKPILING OF EXCAVATED MATERIALS.
6. STRIP AREA FOR LAYDOWN, TRAILERS, AND PARKING.
7. INSTALL TEMPORARY TRAILERS AND PARKING.
8. STRIP AND STOCKPILE TOPSOIL AND INSTALL SILT FENCE.
9. CONSTRUCT SEDIMENT TRAPS AS SHOWN AND PER DETAIL, CONSTRUCT ALL DIVERSIONS ENSURING ALL SEDIMENT WILL BE DIRECTED TO THE TRAPS AS REQUIRED.

D. ALL PERIMETER CONTROLS MUST BE INSTALLED, STABILIZED, INSPECTED BY DNREC PRIOR TO BULK GRADING, BUILDING PERMIT ISSUANCE, OR ANY UTILITY INSTALLATION ON NON-RESIDENTIAL PROJECTS. PRIOR TO THIS PRE-CONSTRUCTION SITE INSPECTION, NO DISTURBANCE MAY OCCUR ON-SITE OTHER THAN THOSE AREAS NECESSARY TO ESTABLISH THE PERIMETER EROSION AND SEDIMENT CONTROLS. INSTALL THE PERIMETER CONTROLS PURSUANT TO THIS PLAN. ALL EARTHEN PERIMETER SEDIMENT CONTROLS, INCLUDING SOIL STOCKPILES, SHALL BE VEGETATIVELY STABILIZED.

E. INSTALL POLLUTION PREVENTION PRACTICES, INCLUDING BUT NOT LIMITED TO:
1. CONCRETE WASHOUT AREA
2. SPILL CONTROL
3. CONCRETE MIXING OPERATION

F. PERIODICALLY MAINTAIN THE PERIMETER CONTROL MEASURES, AS NEEDED. THE CONTRACTOR SHALL AT ALL TIMES PROTECT AGAINST SEDIMENT OR DEBRIS LADEN RUNOFF OR WIND FROM LEAVING THE SITE. PERIMETER CONTROLS ARE TO BE CHECKED DAILY AND ADJUSTED AND/OR REPAIRED AS REQUIRED TO FULLY CONTAIN AND CONTROL SEDIMENTATION ON THE SITE. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN WHEN IT HAS REACHED HALF OF THE EFFECTIVE CAPACITY OF THE CONTROL. IN ADDITION, THE CONTRACTOR MAY NEED TO ADJUST OR REPAIR MEASURES IN TIMES OF ADVERSE WEATHER CONDITIONS, OR AS DIRECTED BY THE DELEGATED AGENCY. THIS INCLUDES PUMPING OF ALL SEDIMENT TRAPS IF NEEDED.

3 G. COMMENCE ROUGH GRADING FOR BUILDING PAD, PARKING AREAS AND ROADWAYS. CONTRACTOR TO ENSURE SUBGRADE REQUIREMENTS ARE MET IN ACCORDANCE WITH THE RECOMMENDATIONS WITHIN THE GEOTECHNICAL REPORT PREPARED BY DUFFIELD ASSOCIATES, INC. (SEE BELOW).

FILL SUBGRADES AND EACH LIFT OF FILL SHOULD BE OBSERVED AND TESTED BY A SOILS TECHNICIAN ON A FULL-TIME BASIS, UNDER THE SUPERVISION OF A REGISTERED ENGINEER AS REQUIRED PER THE 2015 INTERNATIONAL RESIDENTIAL CODE. ALL COMPACTIVE EFFORT SHOULD BE VERIFIED BY IN-PLACE DENSITY TESTING.

CAREFUL FIELD REVIEW OF THE SOIL CONDITIONS SHALL BE PERFORMED PRIOR TO CONSTRUCTION BY A QUALIFIED GEO-TECHNICAL ENGINEER THAT IS FAMILIAR WITH THE CURRENT GEO-TECHNICAL REPORT PREPARED BY DUFFIELD ASSOCIATES, INC.

3 H. BEGIN PLACEMENT OF UTILITIES SUCH AS STORM SEWER, WATER, SEWER, ELECTRIC, AND GAS. UTILITIES ARE TO BE INSTALLED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT PREPARED BY DUFFIELD ASSOCIATES, INC.

I. INSTALL CURB AND PAVEMENT BASE COURSE.

J. INSTALL INLET PROTECTION ON ALL INLETS THAT HAVE BEEN INSTALLED DURING THE COURSE OF A DAY PRIOR TO THE END OF THE DAY OR AN ANTICIPATED RAIN EVENT.

K. ONCE STORM DRAINAGE STRUCTURES ARE ON-LINE, PLACE REMAINING CURBING AND PAVEMENT BASE COURSE.

L. PERIODICALLY MAINTAIN THE PERIMETER CONTROL MEASURES, AS NEEDED. THE CONTRACTOR SHALL AT ALL TIMES PROTECT AGAINST SEDIMENT OR DEBRIS LADEN RUNOFF OR WIND FROM LEAVING THE SITE. PERIMETER CONTROLS ARE TO BE CHECKED DAILY AND ADJUSTED AND/OR REPAIRED AS REQUIRED TO FULLY CONTAIN AND CONTROL SEDIMENTATION ON THE SITE. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED HALF OF THE EFFECTIVE CAPACITY OF THE CONTROL. IN ADDITION, THE CONTRACTOR MAY NEED TO ADJUST OR REPAIR MEASURES IN TIMES OF ADVERSE WEATHER CONDITIONS, OR AS DIRECTED BY THE DELEGATED AGENCY. THIS INCLUDES PUMPING OF ALL SEDIMENT TRAPS IF NEEDED.

A WATER TRUCK SHALL BE AVAILABLE AT ALL TIMES FOR DUST CONTROL AND FOR ASSISTING WITH GERMINATION OF VEGETATIVE STABILIZATION IF ON-SITE WATER IS NOT AVAILABLE.

M. WITH THE APPROVAL OF THE DNREC SITE INSPECTOR, CONVERT THE SEDIMENT TRAPS INTO STORMWATER FACILITIES. CONTACT CCR AND SURVEYOR AT LEAST 3 WORKING DAYS PRIOR TO CONVERSION, AS THEY NEED TO BE PRESENT.

N. NOTIFY THE PERSON RESPONSIBLE FOR STORMWATER SYSTEM CONSTRUCTION REVIEW AT LEAST 3 DAYS PRIOR TO THE START OF THE STORMWATER SYSTEM; STORMWATER FACILITIES MUST BE REVIEWED THROUGHOUT THEIR CONSTRUCTION.

NOTE: AN AS-BUILT SURVEY IS REQUIRED FOR EACH STORMWATER FACILITY. THERE ARE COMPONENTS OF THE SYSTEM THAT MUST BE SURVEYED PRIOR TO AND DURING ITS CONSTRUCTION.

NOTE: STORMWATER FACILITIES ARE TO REMAIN AS SEDIMENT TRAPS UNTIL THE AREA DRAINING TO THEM HAS BEEN STABILIZED. THEN THEY CAN BE CONVERTED TO PERMANENT STORMWATER FACILITITES.

O. THE UNDERLYING SOIL IN EACH OF THE INFILTRATION AREAS SHALL BE AS WELL-AERATED AND UN-COMPACTED AS POSSIBLE. NO HEAVY EQUIPMENT IS TO BE USED ON THE BOTTOM OF THE FACILITY. ANY COMPACTION WHICH MAY OCCUR DURING CONSTRUCTION SHALL BE ALLEVIATED BY THE CONTRACTOR AT HIS EXPENSE PRIOR TO PLACEMENT OF SYSTEM COMPONENTS.

P. CONFIRMATION INFILTRATION TESTING BY THE ON-SITE GEOTECHNICAL ENGINEER MUST BE PERFORMED ON EACH FACILITY ONCE THEY HAVE BEEN EXCAVATED TO THE REQUIRED BOTTOM ELEVATION AS SHOWN ON THE APPROVED PLANS AND REPORTED TO BOTH THE DESIGN ENGINEER AND DNREC.

Q. IT IS IMPORTANT TO PREPARE GOOD SEEDBED PRIOR TO ESTABLISHING VEGETATION. THE SEEDBED SHOULD BE WELL PREPARED, LOOSE TOPSOIL, FREE OF SIZEABLE ROCKS, DEBRIS, PETRIFIED WOOD ETC.

PRIOR TO APPLYING PERMANENT SEEDING:
ALL PERVIOUS AREAS WITHIN DISTURBED AREAS SHALL BE DEEP-TILLED TO PROMOTE PASSIVE INFILTRATION OF STORMWATER RUNOFF.

R. FINE GRADE ALL AREAS INTENDED TO RECEIVE PERMANENT STABILIZATION MEASURES WITH MINIMUM OF 6" COMPACTED TOPSOIL. PLACE SLOPE STABILIZATION AS SHOWN ON CONSTRUCTION SITE STORMWATER MANAGEMENT PLAN. PROVIDE PERMANENT SEEDING AND STRAW MULCH AS SPECIFIED.

THE SOIL SURFACE SHOULD NOT BE COMPACTED OR CRUSTED OVER WHEN SEED AND MULCH IS APPLIED.

S, EROSION AND SEDIMENT CONTROL DEVICES TO BE REMOVED ONLY AFTER WORK IN AN AREA HAS BEEN COMPLETED AND STABILIZED, WITH WRITTEN APPROVAL FROM THE AGENCY CONSTRUCTION SITE REVIEWER.

T. INSTALL ALL PLANTINGS ETC. AS SHOWN ON THE APPROVED RECORD LANDSCAPE PLAN. WHEN ALL PLANTINGS ARE INSTALLED, SCHEDULE THE RECORD LANDSCAPING INSPECTION WITH LANDSCAPE ARCHITECT FOR THIS PROJECT.

U. PRIOR TO NOTIFYING DNREC OF COMPLETION, A STORMWATER MANAGEMENT FACILITY AS-BUILT SUBMISSION PACKAGE MUST BE SUBMITTED TO DNREC FOR APPROVAL OF ALL FACILITIES AND MUST BE APPROVED PRIOR TO ISSUANCE OF A PERMANENT CERTIFICATE OF OCCUPANCY. VEGETATIVE STABILIZATION REQUIREMENTS MUST BE MET IN ORDER TO RECEIVE A PERMANENT CERTIFICATE OF OCCUPANCY. THIS INCLUDES 100% STABILIZATION OF ALL AREAS WITHIN A STORMWATER MANAGEMENT AREA AND 70% STABILIZATION ON ALL OTHER AREAS.

V. A RECORD PLAN COMPLIANCE INSPECTION BY THE TOWN OF MIDDLETOWN MUST BE COMPLETED AND PASSED PRIOR TO RECEIVING A CERTIFICATE OF OCCUPANCY.

W. THE TERMINATION OF THE CONSTRUCTION GENERAL PERMIT WILL REQUIRE SUBMISSION AND ACCEPTANCE OF THE POST CONSTRUCTION VERIFICATION DOCUMENTS, INCLUDING FINAL STABILIZATION THROUGHOUT THE SITE, ALL ELEMENTS OF THE SEDIMENT AND STORMWATER MANAGEMENT PLAN IMPLEMENTED, AND ACCEPTANCE OF THE FINAL OPERATION AND MAINTENANCE PLAN.

VIII. GENERAL MAINTENANCE REQUIREMENTS

MAINTENANCE OF THE POST-CONSTRUCTION STORMWATER MANAGEMENT FACILITIES, INCLUDING BUT NOT LIMITED TO, OUTLET STRUCTURES, EMBANKMENTS, PLANTINGS, AND GENERAL APPEARANCE WILL BE THE RESPONSIBILITY OF THE PROPERTY OWNER.

SEE POST-CONSTRUCTION SITE STORMWATER MANAGEMENT FACILITY PLANS FOR SPECIFIC OPERATION & MAINTENANCE REQUIREMENTS FOR EACH FACILITY.

SUPPLEMENTAL SEDIMENT AND STORMWATER NOTES

1. IT WILL BE THE LANDOWNER'S RESPONSIBILITY FOR PERPETUAL MAINTENANCE OF ALL STORMWATER MANAGEMENT FACILITIES.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AND STABILIZE ALL EROSION AND SEDIMENT CONTROLS AND STORMWATER PRACTICES DURING CONSTRUCTION, INCLUDING THOSE THAT ARE DISTURBED BY UTILITY COMPANIES.
3. ALL ROCK/STONE, WITH THE EXCEPTION OF CHECK DAMS, MUST BE UNDERLINED WITH A GEOTEXTILE FABRIC.
4. IN THE EVENT EARTHWORK OPERATIONS ARE HALTED FOR THE WINTER MONTHS, BEFORE FINAL GRADING AND SEEDING OF ALL DISTURBED AREAS ARE COMPLETED, THOSE AREAS SHALL BE EITHER SEEDED OR STABILIZED WITH MULCH AND TACKED WITH A CHEMICAL ADHESIVE.
5. THE CONTRACTOR SHALL USE ALL MEANS NECESSARY TO CONTROL DUST ON AND NEAR THE WORK AREA IF SUCH DUST IS CAUSED BY THE CONTRACTOR'S OPERATIONS DURING THE WORK, OR IF RESULTING FROM THE CONDITIONS IN WHICH THE CONTRACTOR LEAVES THE SITE. IF DUST BECOMES A PROBLEM, SPRAY DISTURBED AREAS WITH WATER HOURLY OR APPLY CALCIUM CHLORIDE.
6. THE CONTRACTOR SHALL CONTROL TRACKING OF SEDIMENT OFF-SITE ONTO PUBLIC PAVED SURFACES. SHOULD TRACKING OCCUR, THE CONTRACTOR SHALL SWEEP OR REMOVE THE SEDIMENT BY OTHER MEANS SO AS TO PREVENT SEDIMENTATION OF OFF-SITE DRAINAGE SYSTEMS OR WATER BODIES.
7. ALL SITE IMPROVEMENTS INCLUDING LANDSCAPING, PERMANENT SITE STABILIZATION AND PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE IN PLACE AND APPROVED PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY.
8. THERE IS AN ESTIMATED 1,000 CUBIC YARDS OF SPOIL MATERIAL GENERATED FROM THIS SITE.

SEDIMENT AND STORMWATER CONSTRUCTION NOTES

1. THE DNREC SEDIMENT AND STORMWATER PROGRAM SHALL BE NOTIFIED IN WRITING 5 DAYS PRIOR TO COMMENCING WITH CONSTRUCTION. FAILURE TO DO SO CONSTITUTES A VIOLATION OF THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLAN.
2. REVIEW AND/OR APPROVAL OF THE SEDIMENT AND STORMWATER MANAGEMENT PLAN SHALL NOT RELIEVE THE CONTRACTOR FROM HIS OR HER RESPONSIBILITIES FOR COMPLIANCE WITH THE REQUIREMENTS OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS, NOR SHALL IT RELIEVE THE CONTRACTOR FROM ERRORS OR OMISSIONS IN THE APPROVED PLAN.
3. IF THE APPROVED PLAN NEEDS TO BE MODIFIED, ADDITIONAL SEDIMENT AND STORMWATER CONTROL MEASURES MAY BE REQUIRED AS DEEMED NECESSARY BY DNREC OR THE DELEGATED AGENCY.
4. FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED FOR ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE WITHIN 14 CALENDAR DAYS UNLESS MORE RESTRICTIVE FEDERAL REQUIREMENTSAPPLY.
5. ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL COMPLY WITH THE DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.
6. AT ANY TIME A DEWATERING OPERATION IS USED, IT SHALL BE PREVIOUSLY APPROVED BY THE AGENCY CONSTRUCTION SITE REVIEWER FOR A NON-EROSIVE POINT OF DISCHARGE, AND A DEWATERING PERMIT SHOULD BE APPROVED BY THE DNREC WELL PERMITTING BRANCH.
7. APPROVED PLANS REMAIN VALID FOR 5 YEARS FROM THE DATE OF APPROVAL.
8. POST CONSTRUCTION VERIFICATION DOCUMENTS SHALL BE SUBMITTED TO THE DEPARTMENT OR DELEGATED AGENCY WITHIN 60-DAYS OF STORMWATER MANAGEMENT FACILITY COMPLETION.
9. APPROVAL OF A SEDIMENT AND STORMWATER MANAGEMENT PLAN DOES NOT GRANT OR IMPLY A RIGHT TO DISCHARGE STORMWATER RUNOFF. THE OWNER/DEVELOPER IS RESPONSIBLE FOR ACQUIRING ANY AND ALL AGREEMENTS, EASEMENTS, ETC., NECESSARY TO COMPLY WITH STATE DRAINAGE AND OTHER APPLICABLE LAWS.
10. THE NOTICE OF INTENT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER A NPDES GENERAL PERMIT FOR THIS PROJECT IS # (TO BE FILLED IN ONCE RECEIVED). THE PERMITTEE OF RECORD SHALL NOT BE RELIEVED OF THEIR RESPONSIBILITIES UNTIL A NOTICE OF TERMINATION HAS BEEN PROCESSED BY THE DEPARTMENT.
11. THE OWNER SHALL BE FAMILIAR WITH AND COMPLY WITH ALL ASPECTS OF THE NPDES CONSTRUCTION GENERAL PERMIT.
12. THE CONTRACTOR SHALL AT ALL TIMES PROTECT AGAINST SEDIMENT OR DEBRIS LADEN RUNOFF OR WIND FROM LEAVING THE SITE. PERIMETER CONTROLS SHALL BE CHECKED DAILY AND ADJUSTED OR REPAIRED TO FULLY CONTAIN AND CONTROL SEDIMENT FROM LEAVING THE SITE. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED HALF OF THE EFFECTIVE CAPACITY OF THE CONTROL. IN ADDITION, THE CONTRACTOR MAY NEED TO ADJUST OR ALTER MEASURES IN TIMES OF ADVERSE WEATHER CONDITIONS, OR AS DIRECTED BY THE AGENCY CONSTRUCTION SITE REVIEWER.
13. BEFORE ANY EARTHWORK OR EXCAVATION TAKES PLACE, THE CONTRACTOR SHOULD CALL MISS UTILITY AT 811 OR 1-800-282-8555 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION, TO HAVE ALL EXISTING UTILITIES MARKED ONSITE.
14. BEST AVAILABLE TECHNOLOGY (BAT) SHALL BE EMPLOYED TO MANAGE TURBID DISCHARGES IN ACCORDANCE WITH REQUIREMENTS OF 7 DEL.C. CH. 60 AND THE CURRENT DELAWARE CONSTRUCTION GENERAL PERMIT (CGP).
15. DOCUMENTATION OF SOIL TESTING AND MATERIALS USED FOR TEMPORARY OR PERMANENT STABILIZATION INCLUDING BUT NOT LIMITED TO SOIL TEST RESULTS, SEED TAGS, SOIL AMENDMENT TAGS, ETC. SHALL BE PROVIDED TO THE DEPARTMENT OR DELEGATED AGENCY TO VERIFY THAT THE PERMANENT OR TEMPORARY STABILIZATION HAS BEEN COMPLETED IN ACCORDANCE WITH THE APPROVED PLAN.
16. THE DEPARTMENT OR DELEGATED AGENCY MAY REQUIRE ADDITIONAL SOIL TESTING AND REAPPLICATION OF PERMANENT OR TEMPORARY STABILIZATION IN ACCORDANCE WITH THE SPECIFICATIONS IN THE DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK, OR ALTERNATIVE MEASURES THAT PROVIDE FUNCTIONAL EQUIVALENCY.

Standard Detail & Specifications
Mulching

DELAWARE EROSION & SEDIMENT CONTROL HANDBOOK

1. Materials and Amounts

a. *Straw* - Straw shall be unrotted small grain straw applied at the rate of 1-1/2 to 2 tons per acre, or 70 to 90 pounds (two bales) per 1,000 square feet. Mulch materials shall be relatively free of weeds and shall be free of noxious weeds such as; thistles, Johnsongrass, and quackgrass. Spread mulch uniformly by hand or mechanically. For uniform distribution of hand spread mulch, divide area into approximately 1,000 square feet sections and place 70-90 pounds (two bales) of mulch in each section.

b. *Wood chips* - Apply at the rate of approximately 6 tons per acre or 275 pounds per 1,000 square feet when available and when feasible. These are particularly well suited for utility and road rights-of-way. If wood chips are used, increase the application rate of nitrogen fertilizer by 20 pounds of N per acre (200 pounds of 10-10-10 or 66 pounds of 30-0-0 per acre).

c. *Hydraulically applied mulch* -The following conditions apply to hydraulically applied mulch:

i. Definitions:
 a. Wood fiber mulch shall consist of specially prepared wood that has been processed to a uniform state, is packaged for sale as a hydraulic mulch for use with hydraulic seeding equipment, and consists of a minimum of 70% virgin or recycled wood fiber combined with 30% paper fiber and additives.
 b. Blended fiber mulch shall consist of any hydraulic mulch that contains greater than 30% paper fiber. The paper component must consist of specially prepared paper that has been processed to a uniform fibrous state and is packaged for sale as a hydraulic mulch for use with hydraulic seeding equipment.
 c. A bonded fiber matrix (BFM) consists of long strand, specially prepared wood fibers that have been processed to a uniform state held together by a water resistant bonding agent. BFMs shall contain no paper (cellulose) mulch but may contain small percentages of synthetic fibers to enhance performance.
 d. Refer to **Figure 3.4.5a** for conditions and limitations of use for each of the above categories of hydraulic mulch.

ii. All components of the hydraulically applied mulches shall be pre-packaged by the manufacturer to assure material performance. Field mixing of the mulch components is acceptable, but must be done per manufacturers recommendations to ensure the proper results.

iii. Hydraulic mulches shall be applied with a viable seed and at manufacturer's recommended rates. Increased rates may be necessary based on site conditions.

iv. Hydraulically applied mulches and additives shall be mixed according to manufacturers recommendations.

iv. Materials within this category shall only be used when hydraulically applied mulch has been specified for use on the approved Sediment and Stormwater Plan, or supplemental approval from the plan approval agency has been obtained in writing for a specific area.

Source:	Symbol:	Detail No.
Delaware ESC Handbook & Filtrex™ International		DE-ESC-3.4.5 Sheet 1 of 3

Effective February 2019

DELAWARE EROSION & SEDIMENT CONTROL HANDBOOK

Standard Detail & Specifications
Mulching

v. Application:
 a. Apply product to geotechnically stable slopes that have been designed and constructed to divert runoff away from the face of the slope.
 b. Do not apply to saturated soils, or if precipitation is anticipated within 24-48 hours.
 c. During the spring (March 1 to May 31) and fall (September 1 to November 30) seasons, hydraulic mulches may be applied in a one-step process where all components are mixed together in single-tank loads. It is recommended that the product be applied from opposing directions to achieve optimum soil coverage.
 d. During the summer (June 1 to August 31) and winter (December 1 to February 28) seasons, the following two-step process is required:
  Step One– Mix and apply seed and soil amendments with a small amount of mulch for visual metering.
  Step Two – Mix and apply mulch at manufacturers recommended rates over freshly seeded surfaces. Apply from opposing directions to achieve optimum soil coverage.
 e. Minimum curing temperature is 40° F (4° C). The best results and more rapid curing are achieved at temperatures exceeding 60° F (15° C). Curing times may be accelerated in high temperature, low humidity conditions on dry soils.

vi. Recommended application rates are for informational purposes only. Conformance with this standard and specification shall be performance-based and requires **100% soil coverage**. Any areas with bare soil showing shall be top dressed until full coverage is achieved.

d. *Compost blanket (CB)* - Loosely applied with a pneumatic blower so that a 1" compost blanket uniformly covers the **soil with 100% coverage**. This application can be used with seed to promote germination by applying the approved seed mix directly into the loosely blown compost. The compost blanket performs best on slopes less than 2:1 and requires no mulch anchoring.

2. Anchoring mulch - Mulch must be anchored immediately to minimize loss by wind or water. This may be done by one of the following methods, depending upon size of area, erosion hazard, and cost.

a. *Crimping* - A crimper is a tractor drawn implement designed to punch and anchor mulch into the top two (2) inches of soil. This practice affords maximum erosion control but is limited to flatter slopes where equipment can operate safely. On sloping land, crimping should be done on the contour whenever possible.

b. *Tracking* - Tracking is the process of cutting mulch (usually straw) into the soil using a bulldozer or other equipment that runs on cleated tracks. Tracking is used primarily on slopes 3:1 or steeper and should be done up and down the slope with cleat marks running across the slope.

c. *Liquid mulch binders* - Applications of liquid mulch binders should be heavier at edges, in valleys, and at crests of banks and other areas where the mulch will be moved by wind or water. All other areas should have a uniform application of binder. The use of synthetic binders is the preferred method of mulch binding and should be applied at the rates recommended by the manufacturer.

d. *Paper fiber* - The fiber binder shall be applied at a net dry weight of 750 lbs/ac. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons.

e. *Nettings* - Synthetic or organic nettings may be used to secure straw mulch. Install and secure according to the manufacturers recommendations.

Source:	Symbol:	Detail No.
Delaware ESC Handbook & Filtrex™ International		DE-ESC-3.4.5 Sheet 2 of 3

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Standard Detail & Specifications
Mulching

DELAWARE EROSION & SEDIMENT CONTROL HANDBOOK

MULCHING MATERIAL SELECTION GUIDE

Percent Slope	Type of Mulch / App. Rate*	Dec. 1 to Feb. 28(29)	March 1 to May 31	June 1 to Aug. 31	Sept. 1 to Nov. 30
Less than 2%	Blended Fiber @ 2000 lbs/ac. minimum	xxxxxxxxxxxxxxxx	OK (≤1 ac.)	xxxxxxxxxxxxxxxx	OK (≤1 ac.)
	Wood Fiber @ 2000 lbs/ac. min.	xxxxxxxxxxxxxxxx	OK	xxxxxxxxxxxxxxxx	OK
	BFM @ 3000 lbs/ac. min.	OK	OK	OK	OK
	Straw @ 2 Tons/ac. Min.	OK	OK	OK	OK
	Stabilization Matting**	OK	OK	OK	OK
	1" Compost Blanket (CB)	OK	OK	OK	OK
2% to 5.9%	Wood Fiber @ 2000 lbs/ac. min.	xxxxxxxxxxxxxxxx	OK	xxxxxxxxxxxxxxxx	OK
	BFM @ 3000-3500 lbs/ac. min	OK	OK	OK	OK
	Straw @ 2 Tons/ac. min.	OK	OK	OK	OK
	Stabilization Matting**	OK	OK	OK	OK
	1" Compost Blanket (CB)	OK	OK	OK	OK
6% to 10.9%	Wood Fiber @ 2000-2500 lbs/ac. min.	xxxxxxxxxxxxxxxx	OK	xxxxxxxxxxxxxxxx	OK
	BFM @ 3500-4000 lbs/ac. min.	OK	OK	OK	OK
	Straw @ 2 Tons/ac. min.	OK	OK	OK	OK
	Stabilization Matting**	OK	OK	OK	OK
	1" Compost Blanket (CB)	OK	OK	OK	OK
11% to 24.9%	Wood Fiber @ 2500-3000 lbs/ac. min.	xxxxxxxxxxxxxxxx	OK	xxxxxxxxxxxxxxxx	OK
	BFM @ 3500-4000 lbs/ac. min.	OK	OK	OK	OK
	Straw @ 2 Tons/ac. min.	OK	OK	OK	OK
	Stabilization Matting**	OK	OK	OK	OK
	1" Compost Blanket (CB)	OK	OK	OK	OK
25% to 33%	Wood Fiber @ 2500-3000 lbs/ac. min.	xxxxxxxxxxxxxxxx	OK	xxxxxxxxxxxxxxxx	OK
	BFM @ 4000 lbs/ac. min.	xxxxxxxxxxxxxxxx	OK	xxxxxxxxxxxxxxxx	OK
	Straw @ 2 Tons/ac. min.	OK	OK	OK	OK
	Stabilization Matting**	OK	OK	OK	OK
	1" Compost Blanket (CB)	OK	OK	OK	OK
33% and up	BFM @ 4000-4500 lbs/ac. min.	xxxxxxxxxxxxxxxx	OK	xxxxxxxxxxxxxxxx	OK
	Straw @ 2 Tons/ac. min.***	OK	OK	OK	OK
	Stabilization Matting**	OK	OK	OK	OK
	1" Compost Blanket (CB)	2:1 Max.	2:1 Max.	2:1 Max.	2:1 Max.

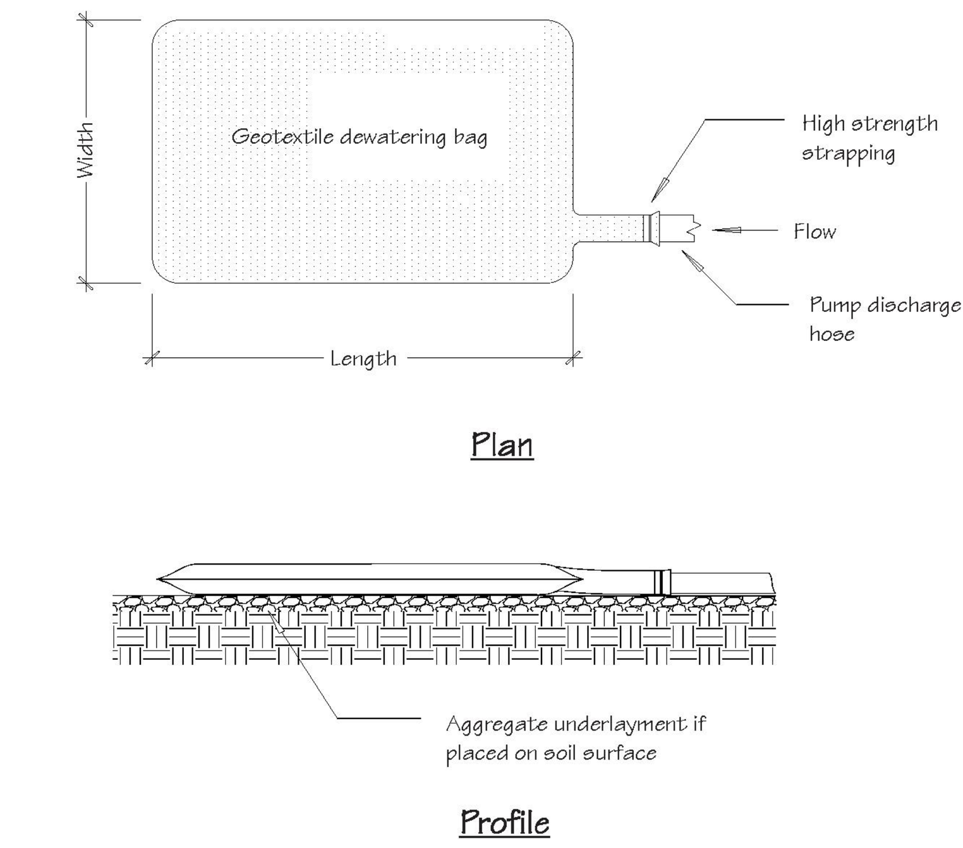
* Note: Manufacturers Recommended Rates for informational purposes only. Performance standard requires 100% soil coverage.
** Note: Stabilization Matting must be applied in accordance with Section 3.4.6 of the Delaware ESC Handbook.
***Note: Straw applied on slopes greater than 33% must be netted (this does not apply to topsoil stockpiles).
OK = Acceptable to use during this time period.
xx = Not acceptable to use during this time period.
All application rates are minimums

Source:	Symbol:	Detail No.
Delaware ESC Handbook & Filtrex™ International		DE-ESC-3.4.5 Sheet 3 of 3

Effective February 2019

Standard Detail & Specifications
Geotextile Dewatering Bag

DELAWARE EROSION & SEDIMENT CONTROL HANDBOOK



NOTE: Pre-manufactured products installed in accordance with manufacturer's recommendations may be used as an equivalent substitute with Departmental approval.

Source:	Symbol:	Detail No.
Adapted from ACF Products, Inc.	GB	DE-ESC-3.2.1.2 Sheet 1 of 2

Effective February 2019

DELAWARE EROSION & SEDIMENT CONTROL HANDBOOK

Standard Detail & Specifications
Geotextile Dewatering Bag

Construction Notes:

1. The dewatering bag should be placed so the incoming water flows into and through the bag, and then flow off the site without creating more erosion. The neck should be tied off tightly to stop the water from flowing out of the bag without going through the walls. The dewatering bag should be placed on a gravel bed to allow water to flow in all directions.
2. The dewatering bag is considered full and should be disposed when it is impractical for the bag to filter the sediment out at a reasonable flow rate. At this point, it should be replaced with a new bag.
3. Disposal may be accomplished as directed by the construction reviewer. If the site allows, the bag may be buried on site and seeded, visible fabric removed and seeded or removed from site to a proper disposal area.

Materials:

1. The geotextile fabric shall be a Type GD-IV.
2. The dewatering bag shall be sewn with a double needle machine using high strength thread. All structural seams will be sewn with high strength, double stitched "J" type. Seam strength test will have the following minimum average roll values:

Type	TEST METHOD	TEST RESULT
Heavy duty	ASTM D-4884	100 lb / in

3. The dewatering bag shall have an opening large enough to accommodate a four (4) inch discharge hose with attached strap to tie off the hose to prevent the pumped water from escaping from the bag without being filtered.

Source:	Symbol:	Detail No.
Adapted from ACF Products, Inc.	GB	DE-ESC-3.2.1.2 Sheet 2 of 2

Effective February 2019

REVISIONS	CHECKED BY
1. REV PER DNREC 05-29-20 COMMENTS	06/12/20 MKB
2. REV PER DNREC 06-22-20 COMMENTS	07/09/20 MKB
3. ADDENDUM #3	07/16/20 MKB

SEDIMENT AND STORMWATER MANAGEMENT PLANS
CONSTRUCTION SITE DETAILS AND NOTES

BRICK MILL
EARLY CHILDHOOD CENTER
MIDDLETOWN HUNDRED - NEW CASTLE COUNTY, DELAWARE

OWNER
APPOQUINIMINK SCHOOL DISTRICT
118 S. SIXTH ST., P.O. BOX 4010
ODESSA, DE 19730
302-376-4014

NEW CASTLE, DE
(302) 323-9377
DOVER, DE
(302) 734-9597
HAVRE DE GRACE, MD
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Landmark
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NEW CASTLE, DELAWARE 19720
PHONE - (302) 323-9377 • FAX - (302) 323-9461
INFO@LANDMARK-SE.COM • WWW.LANDMARK-SE.COM

THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.

ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND THE RULES AND REGULATIONS THERETO APPURTENANT

DRAWN BY: MKB	SCALE: NTS
DESIGNED BY: MKB	DATE: 05/01/2020
CHECKED BY: TCW	LAST MODIFIED 7/15/20
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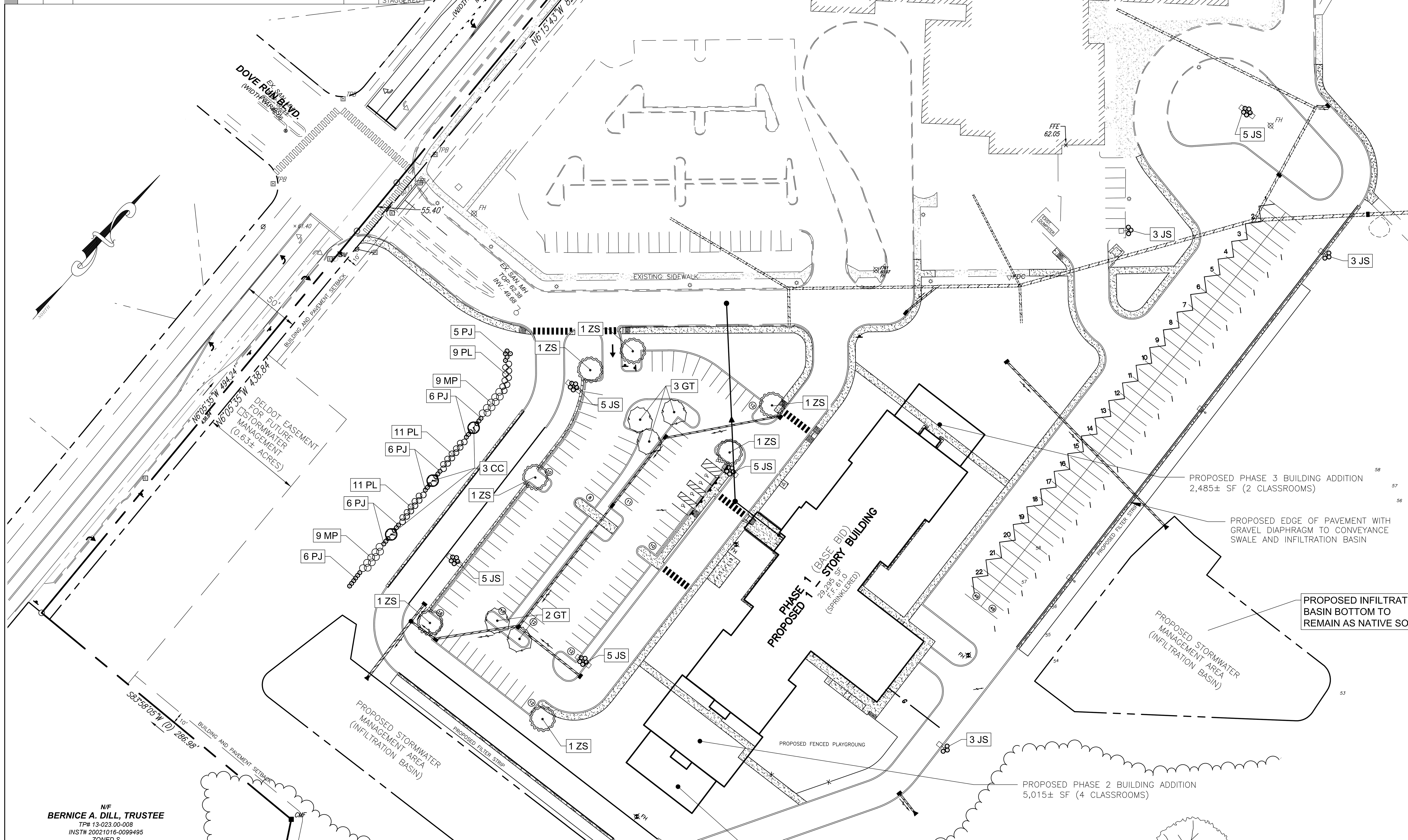
CE-06

SHEET NO. CE-06 of 39

	A	B	C	D	E
1	PLANTING SCHEDULE				
2	KEY	QUANT.	BOTANICAL/COMMON	SIZE	REMARKS
3	MAJOR TREES				
4	GT	5	GLEDITSIA TRIACANTHOS 'SHADEMASTER' / SHADEMASTER LOCUST	2 1/2"	B&B
5	ZS	7	ZELCOVA SERRATA 'GREEN VASE' / GREEN VASE ZELKOVA	2 1/2"	B&B
6	MINOR TREES				
7	CC	3	CERCIS CANADENSIS 'FORESET PANSY' / FOREST PANSY REDBUD	1 1/2"	B&B
8	EVERGREEN SHRUBS				
9	JS	37	JUNIPERUS SQUAMATA 'BLUE STAR' / BLUE STAR JUNIPER	18"	
10	MP	18	MYRICA PENSYLVANICA 'MORTON' / SILVER SPRITE NORTHERN BAYBERRY	18"	3' O.C. STAGGERED
11	PJ	29	PIERIS JAPONICA 'MOUNTAIN FIRE' / MOUNTAIN FIRE PIERIS	18"	3' O.C.
12	PL	31	PRUNUS LAUROCERASUS 'OTTO LUYKEN' / OTTO LUYKEN LAUREL	18"	3' O.C. STAGGERED



LEGEND

- EXISTING STRUCTURE
- PROPOSED STRUCTURE
- EXISTING SIDEWALK
- PROPOSED SIDEWALK
- PROPOSED HEAVY DUTY SIDEWALK
- PROPOSED CONCRETE
- EXISTING CURB
- EXISTING EDGE OF PAVING
- EXISTING CONCRETE
- EXISTING SEWER MANHOLE AND PIPE
- PROPOSED SEWER MANHOLE AND PIPE
- EXISTING STORM INLET AND PIPE
- PROPOSED STORM INLET AND PIPE
- EXISTING FENCE LINE
- PROPOSED RIPRAP
- PROPOSED CURB
- EXISTING FIRE HYDRANT
- PROPOSED SIGN
- EXISTING UTILITY POLE
- PROPOSED FIRE HYDRANT
- PROPOSED RIGHT-OF-WAY MONUMENT
- PROPOSED LIGHT POLE

GENERAL CONSTRUCTION NOTES

1. LANDMARK ENGINEERING, INC. MAKES NO GUARANTEE AS TO THE EXISTENCE OR NON-EXISTENCE, LOCATION, DEPTH, SIZE OR CONDITION OF ANY UNDERGROUND UTILITIES SHOWN ON THIS PLAN NOT ACCESSIBLE FROM THE SURFACE OF THE GROUND. EXISTING UTILITIES ARE SHOWN IN ACCORDANCE WITH INFORMATION PROVIDED BY THE RESPECTIVE UTILITY COMPANIES AT THE TIME THE PLAN WAS PREPARED. THE CONTRACTOR IS TO COORDINATE ALL WORK WITH UTILITY COMPANIES INVOLVED.
2. IT IS THE RESPONSIBILITY OF THE OWNER, OR HIS CONTRACTOR, TO VERIFY AND ALLOW FOR THE LOCATION AND DEPTH OF THE UNDERGROUND UTILITIES WITHIN THE WORK AREA SHOWN ON THIS PLAN. THE CONTRACTOR SHALL NOT BEGIN ANY EXCAVATION OR OTHER CONSTRUCTION AROUND OR IMMEDIATELY ADJACENT TO EXISTING UTILITIES WITHOUT NOTIFYING THE UTILITY OWNER(S) AT LEAST SEVENTY-TWO (72) HOURS IN ADVANCE OF THE START OF EXCAVATION OR CONSTRUCTION. TEST PITS FOR UTILITY LOCATIONS MAY OR MAY NOT BE REQUIRED.
3. PRIOR TO ANY CONSTRUCTION, IT IS RECOMMENDED THE CONTRACTOR EXCAVATE IN THE AREA OF ANY POTENTIAL UTILITY CROSSING TO VERIFY THAT THE UTILITY WILL NOT INTERFERE WITH CONSTRUCTION. IF, AFTER UNCOVERING THE UTILITY, THERE IS ANY QUESTION CONCERNING A POSSIBLE CONFLICT, THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE ENGINEER. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ALL EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE DONE TO THEM DUE TO THEIR NEGLIGENCE SHALL BE IMMEDIATELY AND COMPETENTLY REPAIRED AT THEIR EXPENSE.

LANDSCAPE PLAN NOTES

GENERAL NOTES:

1. ALL PLANTS TO BE LOCATED WITH RESPECT TO PROPOSED OR EXISTING UTILITIES.
2. EXAMINE ALL ENGINEERING DRAWINGS AND FIELD CONDITIONS FOR SPECIFIC LOCATIONS OF UTILITIES, STRUCTURES, ETC. NOTIFY THE UNDERSIGNED PROFESSIONAL IMMEDIATELY, IN WRITING, IN REFERENCE TO DISCREPANCIES OR LOCATION CONFLICTS.
3. IN THE EVENT THAT PLANT QUANTITY DISCREPANCIES OR MATERIAL OMISSIONS OCCUR IN THE PLANTING SCHEDULE, THE PLAN SHALL SUPERSEDE.
4. LANDSCAPE CONTRACTOR TO COORDINATE ALL WORK WITH SITE CONTRACTOR.
5. ALL TREES, SHRUBS AND PLANTS SHALL CONFORM WITH THE MOST CURRENT VERSION OF THE 'AMERICAN STANDARD FOR NURSERY STOCK' OF THE AMERICAN ASSOCIATION OF NURSERYMEN.
6. VERIFICATION OF ALL PLANT MATERIALS TO BE DONE IN FIELD.

PLANT MATERIALS:

7. NO PLANT SUBSTITUTION SHALL BE ALLOWED WITH REGARD TO SIZE, SPECIES, NAMED VARIETY OR CULTIVAR, WITHOUT THE PRIOR PERMISSION FROM LANDMARK SCIENCE & ENGINEERING.
8. ALL PLANTING MATERIALS AND METHODS SHALL MEET OR EXCEED THE REQUIREMENTS OF THE MUNICIPAL ORDINANCES AND THE AMERICAN STANDARD FOR NURSERY STOCK – ANSI Z60.1 (CURRENT VERSION).
9. ALL MATERIALS ARE SUBJECT TO THE APPROVAL OF LANDMARK SCIENCE & ENGINEERING BEFORE, DURING, AND AFTER INSTALLATION.
10. ALL PLANT MATERIAL SHALL BE HEALTHY, VIGOROUS, AND FREE OF PESTS AND DISEASE.
11. ANY PLANT MATERIAL WHICH IS DISEASED, DISTRESSED, DEAD, OR REJECTED (PRIOR TO SUBSTANTIAL COMPLETION) SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, AND SIZE AND MEETING ALL PLANT LIST SPECIFICATIONS.
12. ALL PLANT MATERIAL SHALL BE CONTAINER GROWN OR BALLED AND BURLAPPED AS INDICATED IN THE PLANT LIST.
13. ALL PLANTS SHALL BE NURSERY GROWN UNDER THE SAME CLIMATE AS THE LOCATION OF THIS PROJECT FOR AT LEAST 2 YEARS AND TAGGED WITH A DURABLE LABEL INDICATING THE GENUS, SPECIES AND SPECIFIED VARIETY OR CULTIVARS.

PLANTING:

14. REFER TO GRASS MIX COMPOSITION SCHEDULE ON THIS SHEET FOR SEEDING MIXTURE OF PROPOSED GRASSED AREAS.
15. ALL PROPOSED AREAS OF GRASSED COVER SHALL BE PLACED AS HYDROSEED IMMEDIATELY AFTER CONSTRUCTION.
16. ALL PROPOSED TREES AND SHRUBS SHALL BE PLANTED AFTER ONE (1) FULL SEASON TO ALLOW SLOPE STABILIZATION AND COMPLETE GRASS GROWTH.
17. CONTRACTOR SHALL BE RESPONSIBLE FOR DELIVERY SCHEDULE AND PROTECTION BETWEEN DELIVERY AND PLANTING TO MAINTAIN HEALTHY PLANT CONDITIONS.
18. SOIL MUST BE FROST-FREE, FRIABLE AND NOT MUDDY AT THE TIME OF PLANTING.
19. IN GENERAL TREES ARE TO BE PLANTED AT INTERVALS WHICH WILL ALLOW THEM TO FULLY DEVELOP INTO CONTINUOUS MASSES OF THE INDIVIDUAL SPECIES. THEREFORE, NO PRUNING TO SHAPE OR SHEARING IS REQUIRED OR DESIRABLE. WHERE DEAD OR CONFLICTING BRANCHING DEVELOPS, IT SHOULD BE PRUNED OUT.

TREE LEGEND

- EXISTING DECIDUOUS/CONIFEROUS TREE
- PROPOSED SHADEMASTER LOCUST
- PROPOSED GREEN VASE ZELCOVA
- PROPOSED FOREST PANSY REDBUD
- PROPOSED SILVER SPRITE NORTHERN BAYBERRY
- PROPOSED MOUNTAIN FIRE ANDROMEDA
- PROPOSED OTTO LUYKEN LAUREL
- PROPOSED BLUE STAR JUNIPER

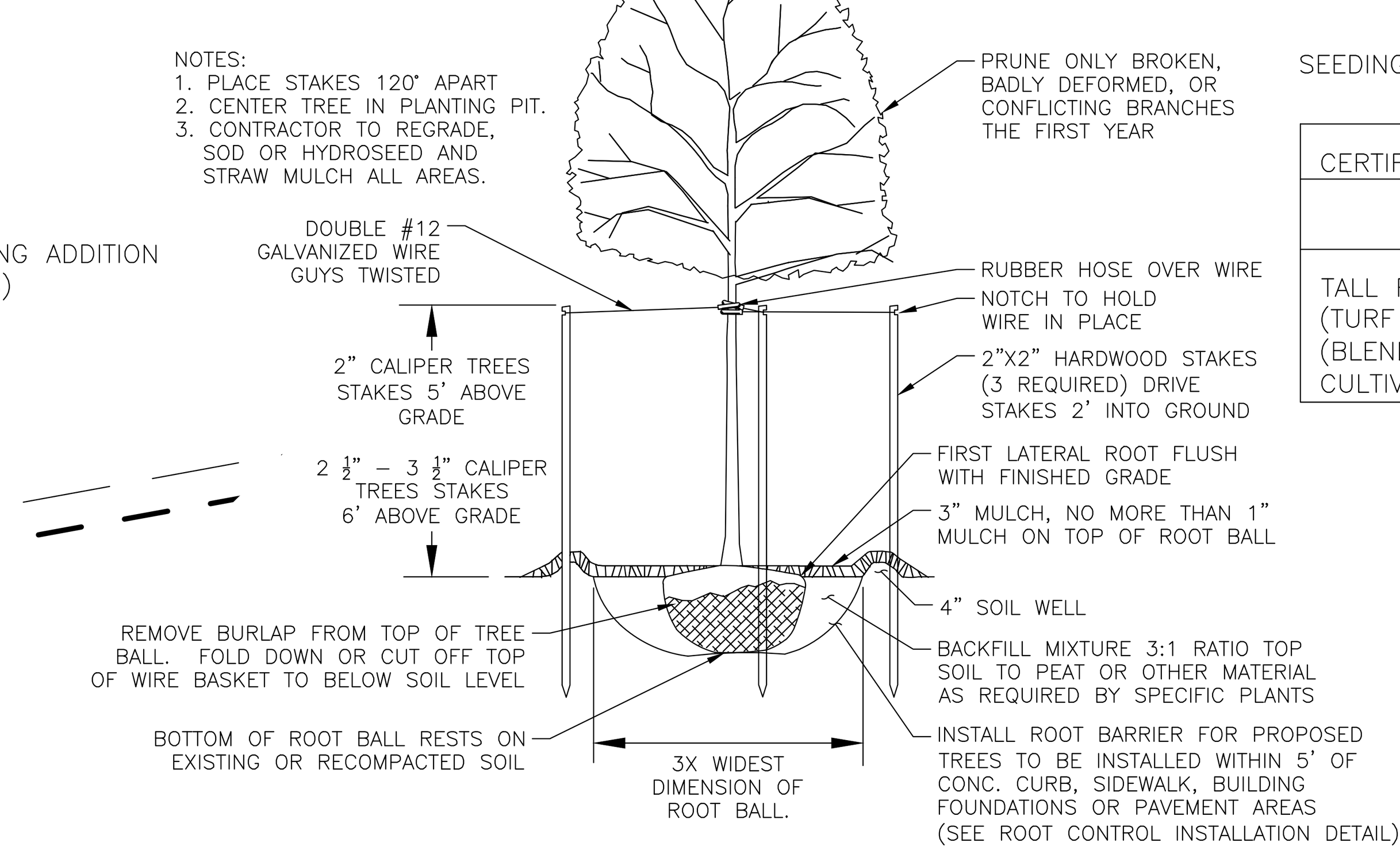
PLANTING REQUIREMENTS		
CATAGORY	REQUIRED	PROVIDED
NUMBER OF PARKING SPACES: 116		
INTERNAL ISLANDS REQUIRED: 1/12 PARKING SPACES	10	10
SHADE TREES REQUIRED: 1/12 PARKING SPACES	10	12
PARKING LOT BUFFER REQUIRED:	234 LF	234 LF
SCREENING SHRUBS REQUIRED: 1/3 LF	78	78
SCREENING TREES PROVIDED		3
LIGHT POLES: 9		
SHRUBS AT BASE OF POLES		37

FILTER STRIP SEEDING

SEEDING MIXTURES SEEDING RATE OPTIMUM SEEDING DATES
O= OPTIMUM, A= ACCEPTABLE PLANTING PERIOD

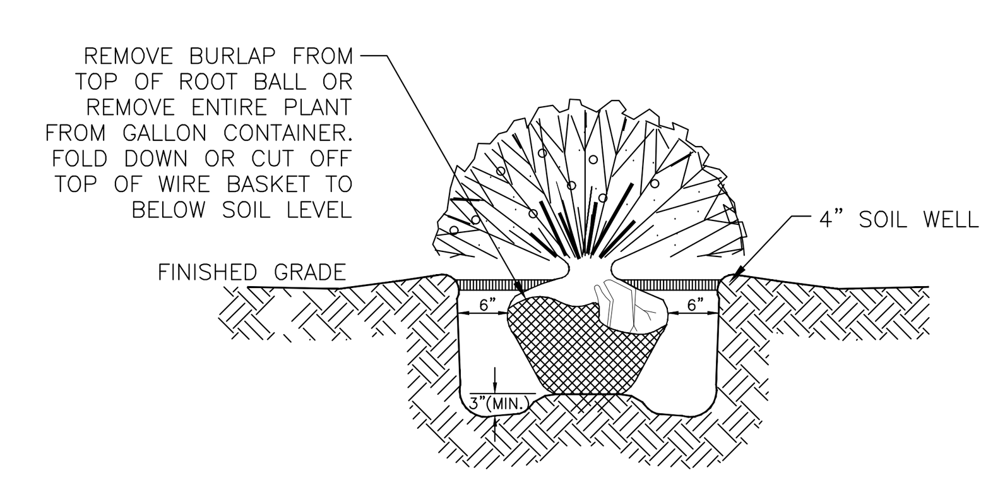
CERTIFIED SEED	LBS/AC	LBS/1000 SQ FT	COSTAL PLAIN 2/1–4/30	COSTAL PLAIN 5/1–8/14	COSTAL PLAIN 8/15–10/31	PEDIMONT 3/1–4/30	PEDIMONT 5/1–7/31	PEDIMONT 8/1–10/31	ALL 10/31–2/1
TALL FESCUE (TURF TYPE) (BLEND OF 3 CULTIVARS)	150	3.5	O	A	O	O	A	O	

NOTES:
1. PLACE STAKES 120° APART
2. CENTER TREE IN PLANTING PIT.
3. CONTRACTOR TO REGRADE, SOD OR HYDROSEED AND STRAW MULCH ALL AREAS.



TYPICAL DECIDUOUS TREE PLANTING DETAIL

NOT TO SCALE



TYPICAL SHRUB PLANTING DETAIL

NOT TO SCALE

RECORD LANDSCAPE PLAN

BRICK MILL EARLY CHILDHOOD CENTER

MIDDLETOWN HUNDRED - NEW CASTLE COUNTY, DELAWARE

OWNER
APPOQUINIMINK SCHOOL DISTRICT
118 S. SIXTH ST., P.O. BOX 4010
ODESSA, DE 19730
302-376-4014

Landmark Science & Engineering
200 CONTINENTAL DRIVE
SUITE 400
NEWARK, DE 19713
PHONE (302) 323-9377
FAX (302) 323-9461
WWW.LANDMARK-SE.COM
INFO @ LANDMARK-SE.COM

201 RESEARCH BLVD.,
SUITE 140
ABERDEEN, MD 21001
PHONE (410) 939-2144
FAX (302) 323-9461
INFOMD @ LANDMARK-SE.COM

REVISIONS | CHECKED BY

THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.

ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND THE RULES AND REGULATIONS THERETO APPURTENANT

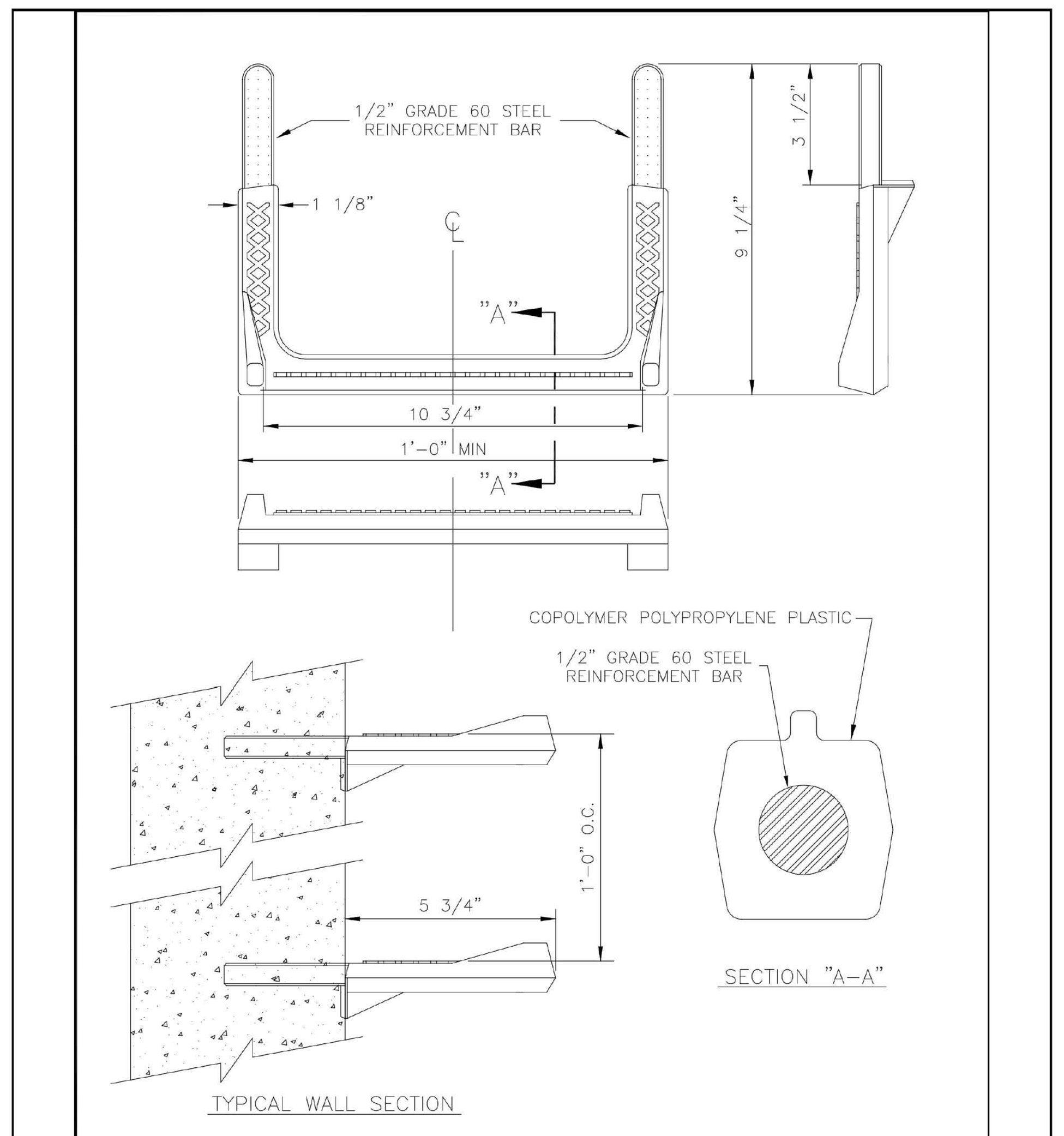
DRAWN BY: MWD | SCALE: 1"=50'
DESIGN BY: MWD | DATE: 04/29/2020
CHECK BY: TCW | SHEET: CL-01 of 01

GRAPHIC SCALE 0 25 50 100

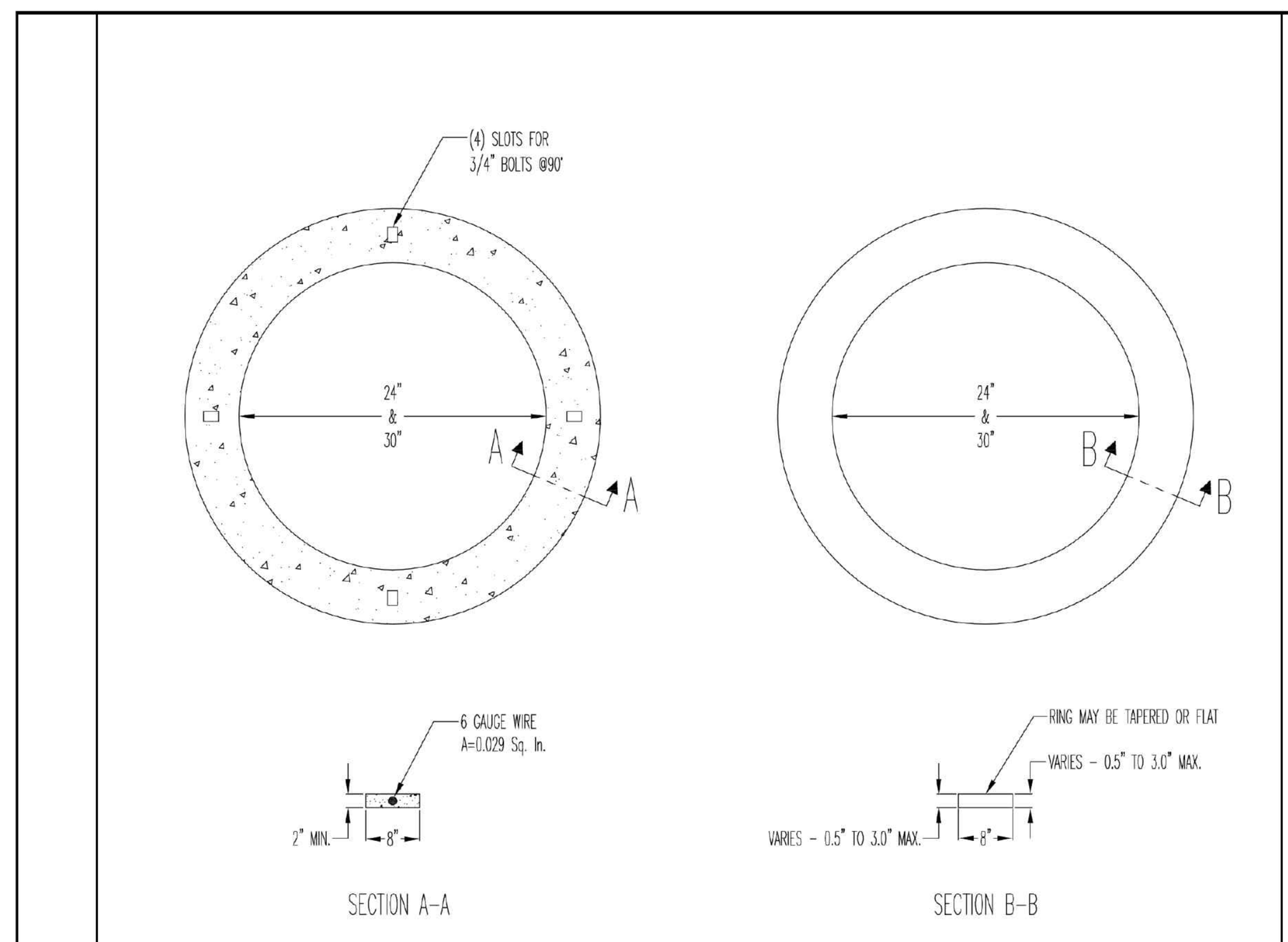
COMMISSION: C2891-1

CL-01

FILE NAME: LANDSCAPE.dwg



ISSUED	2010	DEPARTMENT OF PUBLIC WORKS	SANITARY SEWER MANHOLE STEPS
REVISED			SANITARY SEWER DETAILS
SOURCE	NEW CASTLE COUNTY		STANDARD NO. S-6



REINFORCED CONCRETE RISER

RUBBER ADJUSTMENT RISER

(NOT TO SCALE)

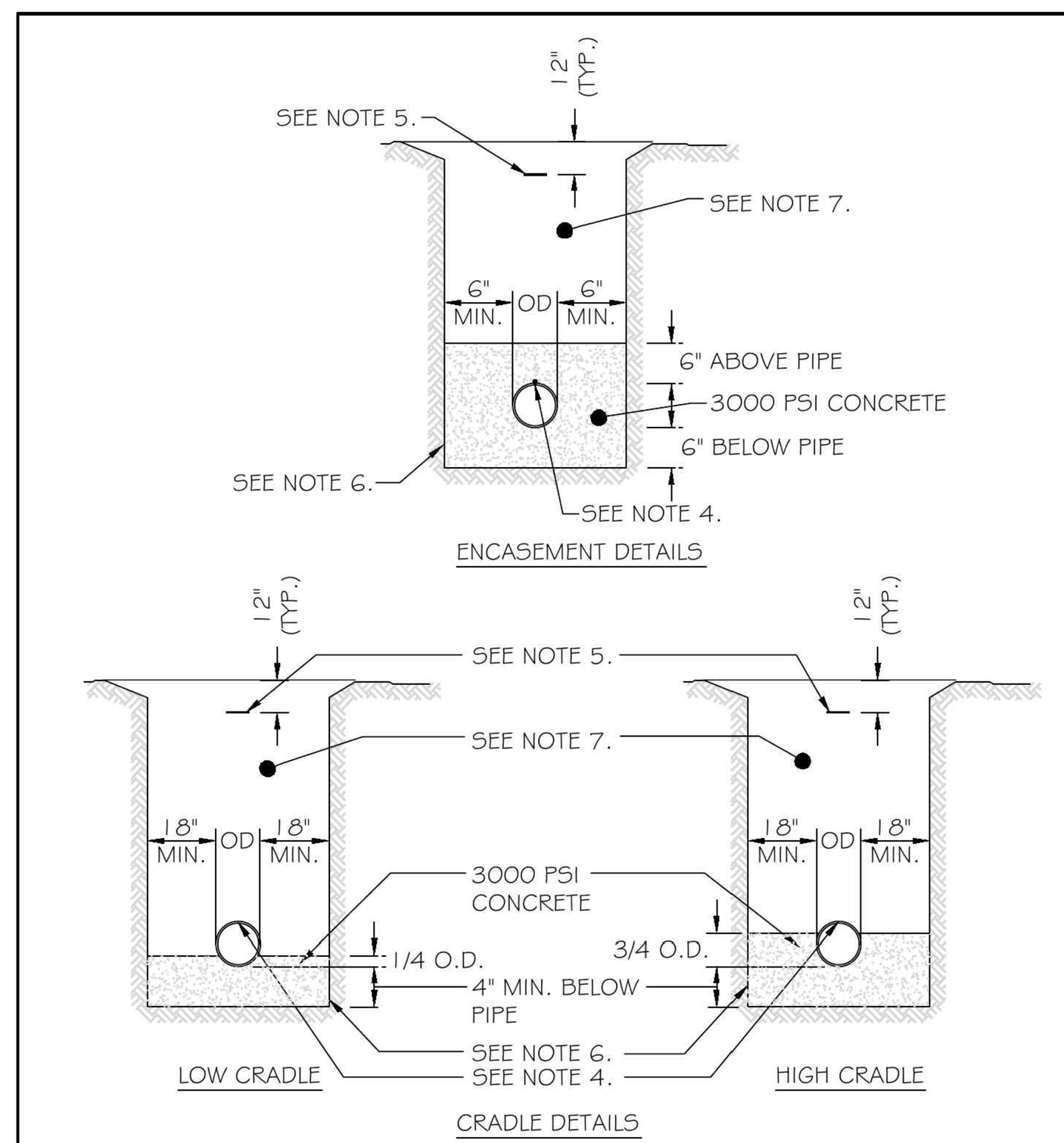
NOTES:

1. CONCRETE SHOULD ATTAIN A COMPRESSIVE STRENGTH OF 4,000 psi IN 28 DAYS.
2. DESIGN MEETS REQUIREMENTS OF A.S.T.M. STANDARD C-478.
3. APPROXIMATE WEIGHT OF ONE REINFORCED CONCRETE RISER:
   24"ø – 140 lbs.
   30"ø – 165 lbs.

NOTES:

1. USE GNR INFRA-RISER RUBBER GRADE RINGS AS DISTRIBUTED BY EAST JORDAN IRON WORKS, INC. EAST JORDAN, MICHIGAN OR APPROVED EQUAL.
2. POLYURETHANE ADHESIVE SEALANT, CONFORMING TO ASTM-D 1850, OR EQUIVALENT, TO BE USED BETWEEN ALL CONTACT SURFACES. SEALANT TO BE APPLIED ON A DIAMETER 1" SMALLER THAN THE OUTSIDE DIAMETER OF THE RUBBER RISER.

ISSUED	2010	DEPARTMENT OF PUBLIC WORKS	RISER RING DETAIL
REVISED			SANITARY SEWER DETAILS
SOURCE	NEW CASTLE COUNTY		STANDARD NO. S-15



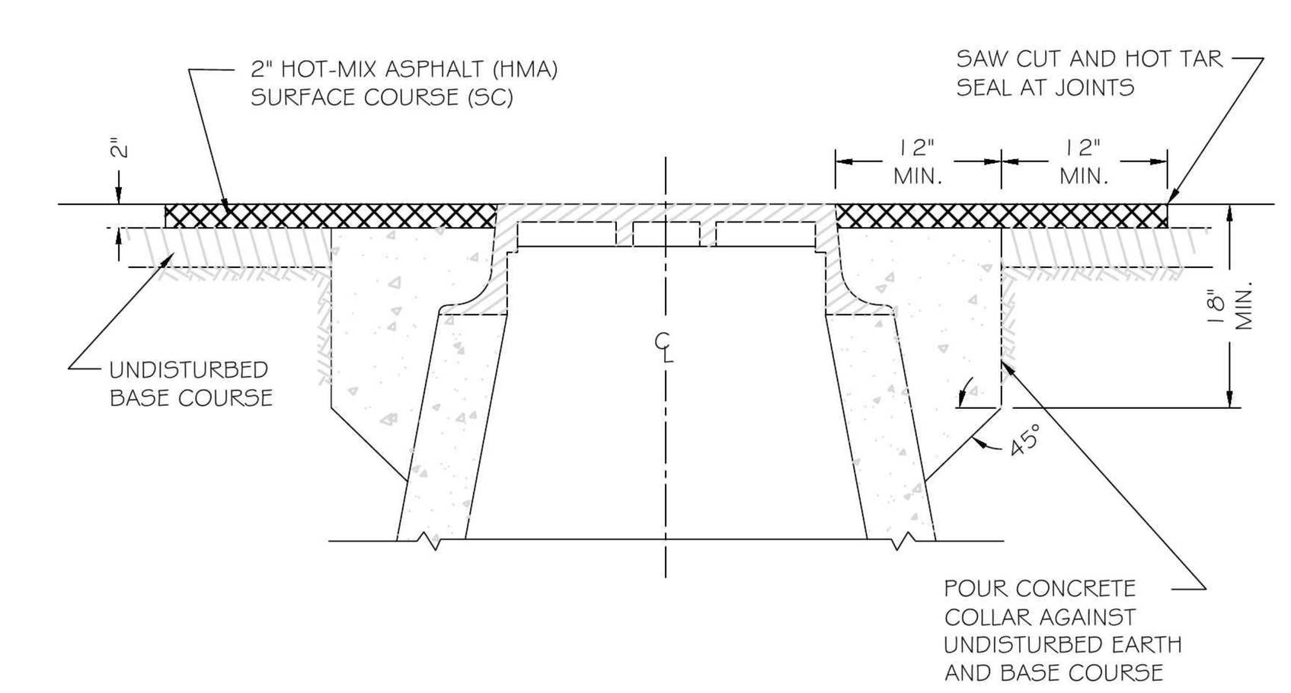
NORMAL PIPE DIAMETER	MAXIMUM PAYMENT CU. FT. PER LIN FT. CONC. ENCASEMENT
6"	1.53
8"	2.55
10"	2.95
12"	3.63
15"	4.20
18"	5.71
21"	6.35
24"	8.22
27"	8.94
30"	9.83
33"	12.16
36"	13.09
42"	15.22
48"	19.83
54"	22.97
60"	24.95
66"	27.71

NORMAL PIPE	MAXIMUM PAYMENT CU. FT. PER LIN FT.	
DIAMETER	HIGH CRADLE	LOW CRADLE
6"	1.28	0.90
8"	1.58	1.03
10"	1.86	1.22
12"	2.33	1.51
15"	2.82	1.73
18"	4.02	2.35
21"	4.52	2.62
24"	5.95	3.34
27"	6.58	3.70
30"	7.42	4.18
33"	9.42	5.08
36"	10.53	5.65
42"	12.30	6.64
48"	16.25	8.49
54"	18.46	9.64
60"	20.80	10.95
66"	23.08	12.25

NOTES:

1. TRENCH SHALL BE BRACED OR SHEETED AS REQUIRED.
2. PROVIDE BEARING FULL LENGTH OF BARREL.
3. DIG BELL HOLES.
4. INSTALL BARE COPPER AWG #10 DETECTOR WIRE ABOVE PIPE. PROVIDE ACCESS FOR MONITORING AT 400' (MAX.) INTERVAL PER SPECS.
5. INSTALL METALLIC DETECTOR TAPE PER SPECS.
6. POUR CONCRETE AGAINST UNDISTURBED EARTH, REMOVE SHEETING BEFORE POURING CONCRETE OR LEAVE LOWER PORTION OF SHEETING IN PLACE.
7. SELECT BACKFILL MATERIAL COMPACTED IN 8" LIFTS TO 95% MOD. PROCTOR DENSITY WITHIN ROADWAY AREAS, 92% MOD. PROCTOR DENSITY OUTSIDE ROADWAY AREAS.

ISSUED	2010	DEPARTMENT OF PUBLIC WORKS	CONCRETE ENCASEMENT AND CRADLE
REVISED			SANITARY SEWER DETAILS
SOURCE			STANDARD NO. S-10



NOTES:

1. USE 3000 LB MIX PORTLAND CEMENT CONCRETE.
2. FOR NEW INSTALLATION USE FORMWORK. DO NOT REMOVE FORMS FOR A MIN. OF 24 HOURS AFTER POUR. COMPACT FILL AROUND COLLAR AFTER 48 HOURS. PAVEMENT MAY BE PLACED AFTER 72 HOURS.
3. DO NOT ALLOW TRAFFIC ON CONCRETE FOR 48 HOURS UNLESS HIGH EARLY ADDITIVE IS USED.

ISSUED	2010	DEPARTMENT OF PUBLIC WORKS	CONCRETE MANHOLE COLLAR (PAVED AREAS)
REVISED			SANITARY SEWER DETAILS
SOURCE			STANDARD NO. S-12

Know what's below. Call before you dig.

MISS UTILITY PHONE 1-800-282-8555 PROTECT YOURSELF, GIVE THREE WORKING DAYS NOTICE

P:\C2891 BRICK MILL\PLANS\CIVIL\SANITARY\SANITARY.DWG

BID DOCUMENTS
SANITARY SEWER DETAILS
BRICK MILL EARLY CHILDHOOD CENTER
MIDDLETOWN HUNDRED - NEW CASTLE COUNTY, DELAWARE

TOWN OF MIDDLETOWN APPROVAL BLOCK

Landmark Science & Engineering

CY-04

BID DOCUMENTS

gilbert Architects Inc.

CONSTRUCTION IMPROVEMENT PLANS
SANITARY SEWER DETAILS
THE NEW:
BRICK MILL EARLY CHILDHOOD CENTER
APPOQUINIMINK SCHOOL DISTRICT
NEW CASTLE COUNTY, DELAWARE

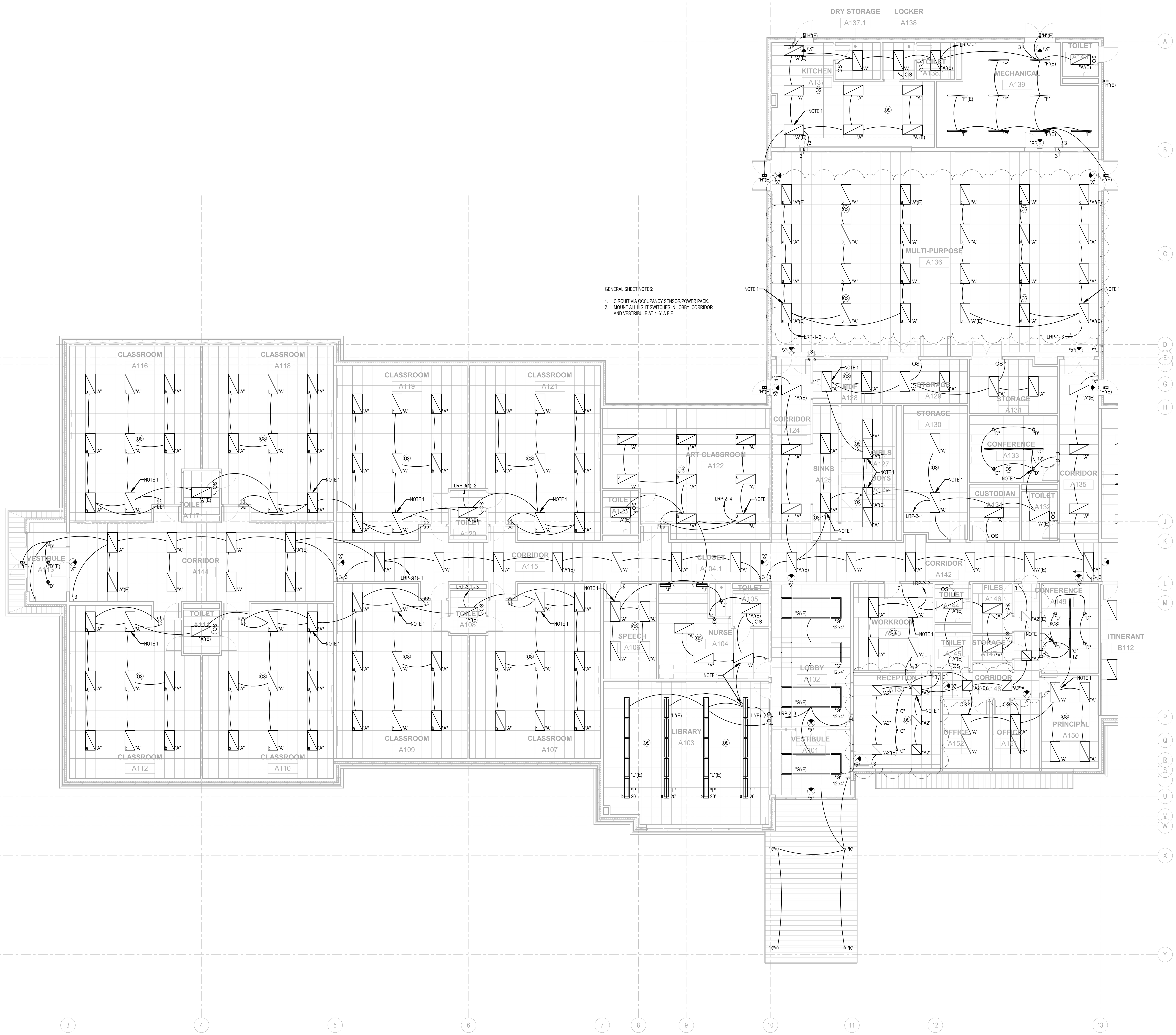
AGENCY NAME
AGENCY PROJ #

REV#	REVISION DATE

DRAWN BY	MKB
PROJECT NO.	2001
SHEET NO.	CY-04
DATE	06/23/2020

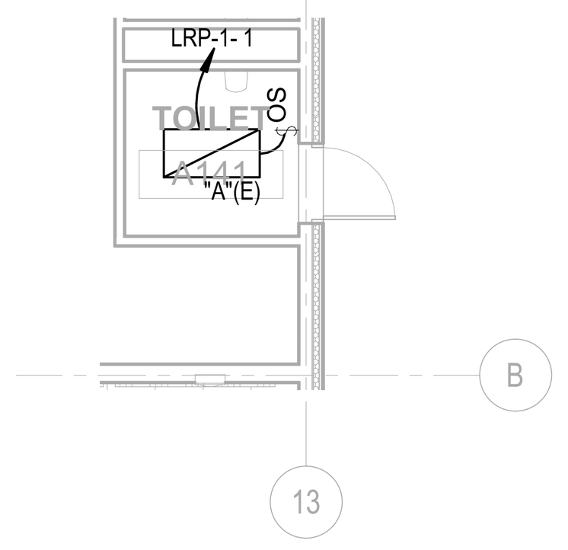
GENERAL SHEET NOTES:

1. CIRCUIT VIA OCCUPANCY SENSOR/POWER PACK.
2. MOUNT ALL LIGHT SWITCHES IN LOBBY, CORRIDOR AND VESTRIBULE AT 4'-6" A.F.F.



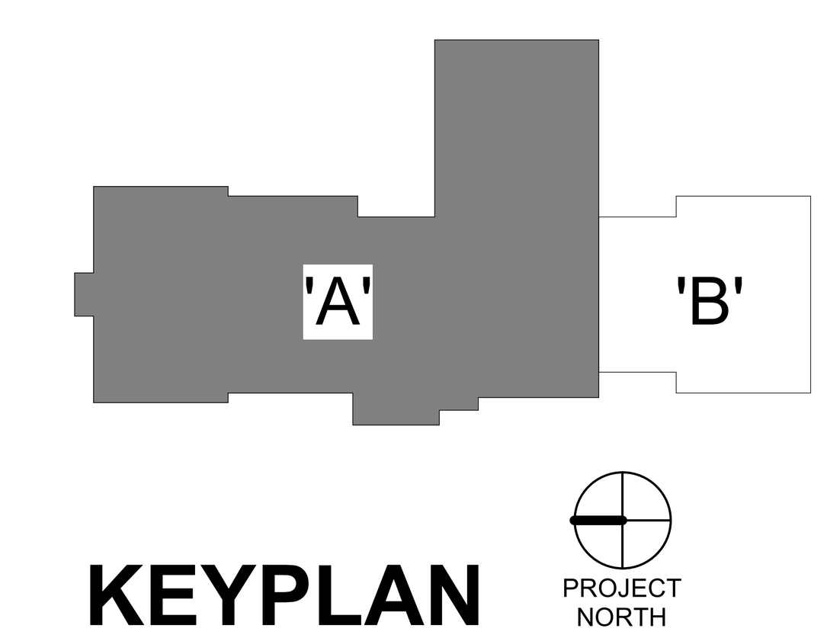
1 PARTIAL FIRST FLOOR LIGHTING PLAN - AREA "A"

E3.1
1/8" = 1'-0"



2 PARTIAL FIRST FLOOR LIGHTING PLAN - AREA "A" ALT. BID NO. 6

E3.1
1/8" = 1'-0"



KEYPLAN

20.013

furlow associates
consulting engineers
650 naamans rd, suite 211 · claymont, de 19703
www.furlowassociates.com · 302.798.3515

BID DOCUMENTS

gilbert Architects Inc.

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P: 717.291.1077 F: 717.392.3923

29L Atlantic Avenue
Ocean View, DE 19970
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10451 Mill Run Circle , Suite 400
Owings Mills, MD 21117
P: 410.356.8856 F: 410.654.8802

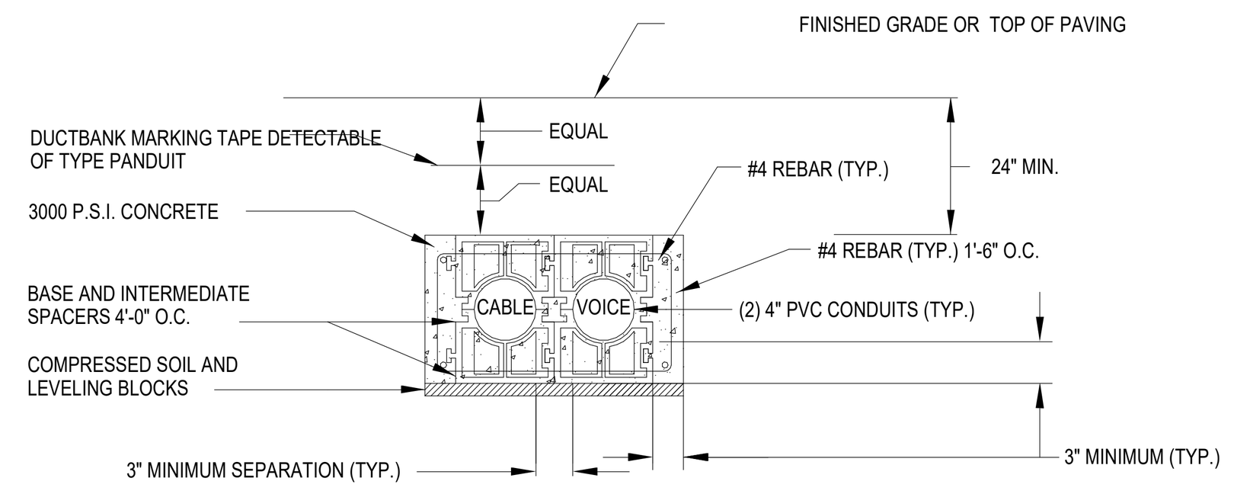
PARTIAL FIRST FLOOR LIGHTING PLAN - AREA "A"

THE NEW:
BRICK MILL EARLY CHILDHOOD CENTER
APPOQUINIMINK SCHOOL DISTRICT
NEW CASTLE COUNTY, DELAWARE

AGENCY NAME
AGENCY PROJ #

REV#	REVISION DATE
1	07/14/2020

DRAWN BY	YHW
PROJECT NO.	2001
SHEET NO.	E3.1
DATE	06/23/2020



NOTES:
1. DETAIL SHOWN ABOVE SHALL BE APPLIED FOR REINFORCED STEEL CONCRETE DUCTBANK UNDERNEATH PAVED AREAS. ALL OTHER PORTIONS OF THE DUCTBANK SHALL NOT BE STEEL REINFORCED AND CONCRETE ENCASED.

DETAIL OF COMMUNICATIONS DUCTBANK "A"

NOT TO SCALE

GENERAL SPECIAL SYSTEMS NOTES

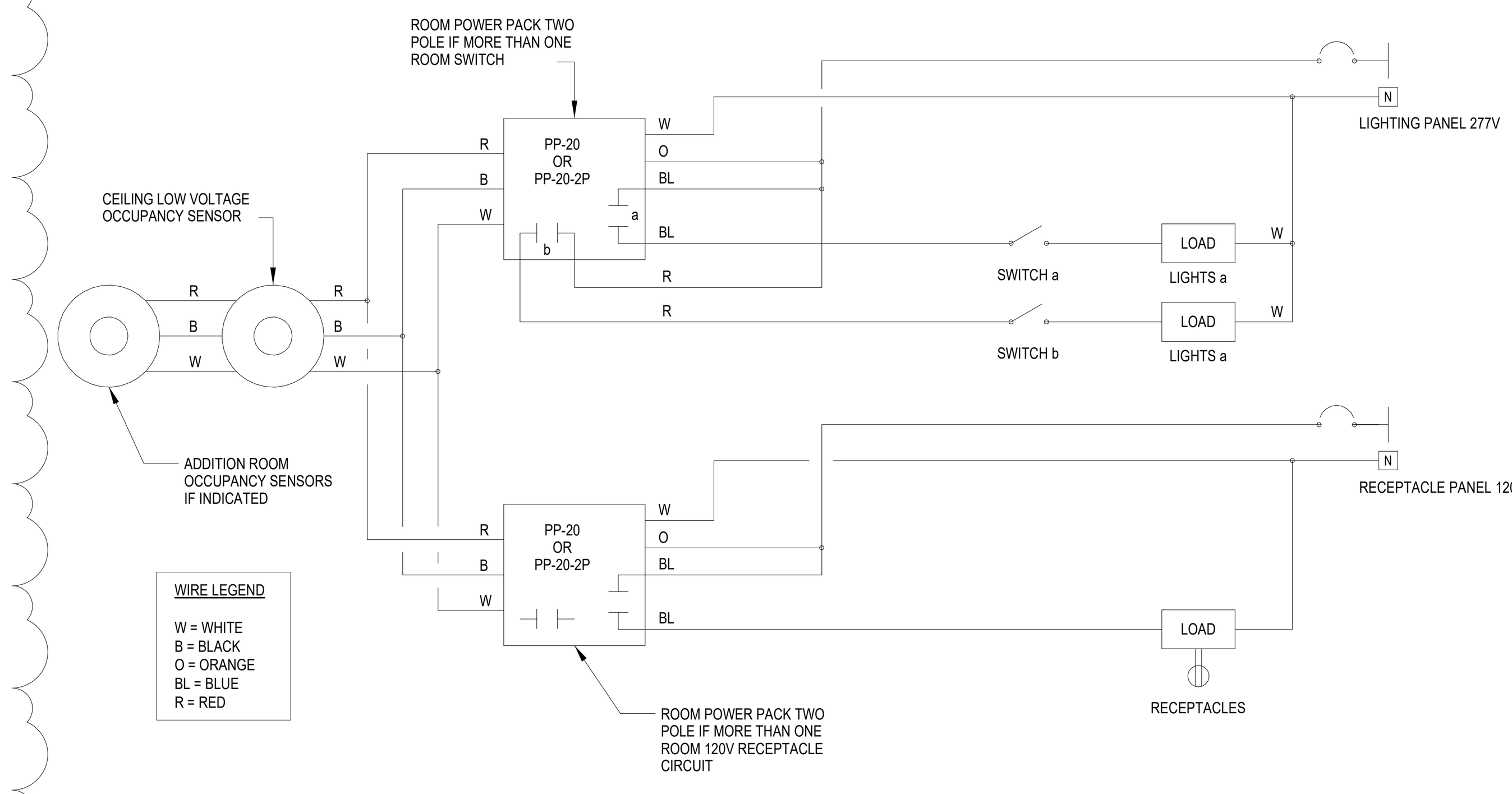
1. IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO COORDINATE WITH JCI-GRINNELL FOR ALL SPECIAL SYSTEMS AS INDICATED ON DRAWINGS AND AS SPECIFIED. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL REQUIRED DEVICE BOXES, CONDUIT TO ABOVE ACCESSIBLE CEILING AND PULL STRINGS AS REQUIRED BY JCI. ELECTRICAL CONTRACTOR SHALL ALSO PROVIDE ALL 120 VOLT CIRCUITS FOR SPECIAL SYSTEMS AS INDICATED ON THE DRAWINGS OR AS REQUIRED BY JCI-GRINNELL.
2. FLOOR PLANS INDICATING FIRE ALARM DEVICES ARE AN INTENT OF THE COVERAGE. IT SHALL BE THE RESPONSIBILITY OF THE LOCAL REPRESENTATIVE FIRE PROTECTION ENGINEER TO DESIGN A COMPLETE SYSTEM TO MEET NFPA AND BE APPROVED BY THE LOCAL FIRE MARSHAL OFFICE.
3. REFER TO DETAIL PLAN INDICATING THE REQUIREMENTS FOR THE LOCAL SOUND SYSTEMS. THIS EQUIPMENT SHALL BE PROVIDED AND INSTALLED BY THE SPECIAL SYSTEM CONTRACTOR. EQUIPMENT INDICATED IS THE BASIS OF DESIGN AND PRE-APPROVED EQUALS SHALL BE SUBMITTED AS INDICATED IN THE SPECIFICATIONS.
4. DOOR HARDWARE AS INDICATED ON THE FLOOR PLANS AND SPECIFICATIONS SHALL BE INCLUDED IN THIS BID. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH INSTALLING HARDWARE CONTRACTOR AND PROVIDE ALL REQUIRED WIRING FROM THE ELECTRIC TRANSFERS TO THE DOOR HARDWARE LOCKS AND UP TO THE POWER SUPPLIES. E.C. SHALL BE RESPONSIBLE FOR ALL 120 VOLT CIRCUITS INDICATED ON THE FLOOR PLANS FOR POWER SUPPLIES AND THE INTERCONNECTING BETWEEN THE TWO POWER SUPPLIES ALONG WITH THE INTEGRATION TO THE CARD ACCESS SYSTEM. E.C. SHALL ALSO COORDINATE WITH JCI GRINNELL TO EXTEND THE EXISTING DISTRICT WIDE CARD ACCESS SYSTEM TO COVER ENTIRE BUILDING. SYSTEM TO BE INTEGRATED WITH INTRUSION SYSTEM FOR CARD ARM/DISARM SYSTEM. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH DOOR HARDWARE INSTALLING CONTRACTOR AND PROVIDE ALL REQUIRED WIRING FOR DOOR RELEASE AT DOORS A123, A124A, EXC111, AND EXC102. DOOR RELEASE PANEL FURNISHED AND INSTALLED AT RECEPTION DESK BY JCI.

PANIC ALARM SYSTEMS:

1. CONTRACTOR TO PROVIDE INTEGRATION REQUIRED FOR THE OPERATION OF THE PANIC ALARM. AS THIS SYSTEM REQUIRES THE INTEGRATION OF THREE SYSTEMS.
   - SYSTEM WILL BE ACTIVATED BY:

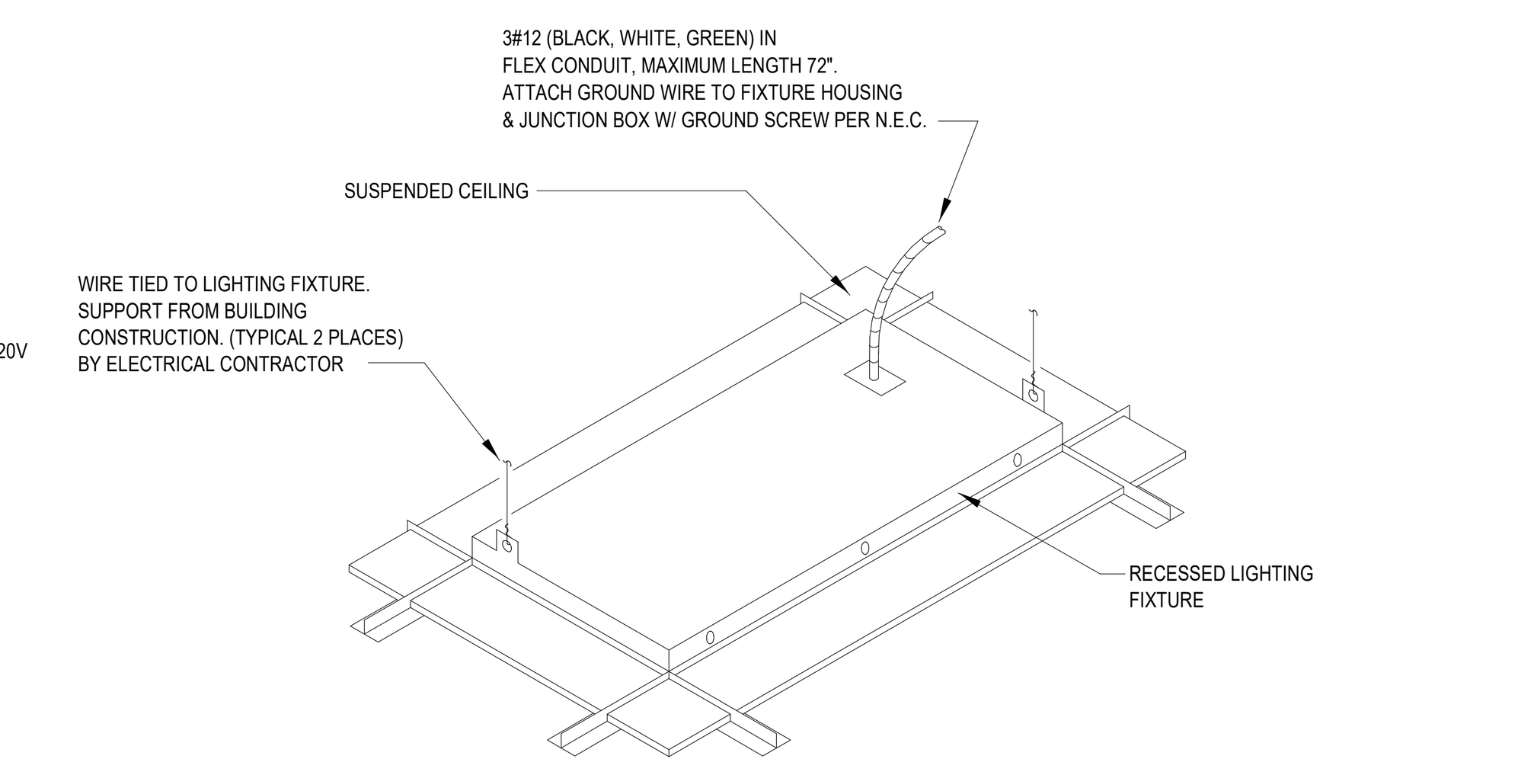
1. ACTIVATING VOIP TELEPHONE SYSTEM EMERGENCY NOTIFICATION SYSTEM.
2. ACTIVATING THE YELLOW BUTTON ON THE DOOR RELEASE CONSOLE.

- BOTH OF THESE POINTS ARE TO BE MONITORED BY THE ACCESS CONTROL SYSTEM.
   - UPON ACTIVATION, ACCESS CONTROL SHALL:
- PROVIDE EMAIL NOTIFICATION TO SELECTED BUILDING STAFF INDICATING THE METHOD IN WHICH THE ALARM WAS ACTIVATED.
- ACCESS CONTROL SHALL PROVIDE SIGNAL (DRY-CONTACTS) TO FIRE ALARM SYSTEM. FIRE ALARM SYSTEM WILL RELEASE ALL INTERIOR FIRE DOORS. DOOR WILL REMAIN DE-ENERGIZED UNTIL THE FIRE ALARM SYSTEM IS RESET.
- ACCESS CONTROL SHALL PROVIDE NOTIFICATION (DRY-CONTACTS CLOSURE FOR FIVE SECONDS) TO INTERCOM SYSTEM. INTERCOM SYSTEM WILL PLAY A WARBLE TONE FOR THE DURATION OF THE CONTACT CLOSURE.



TYPICAL CLASSROOM LIGHTING & RECEPTACLE CONTROL WIRING DIAGRAM

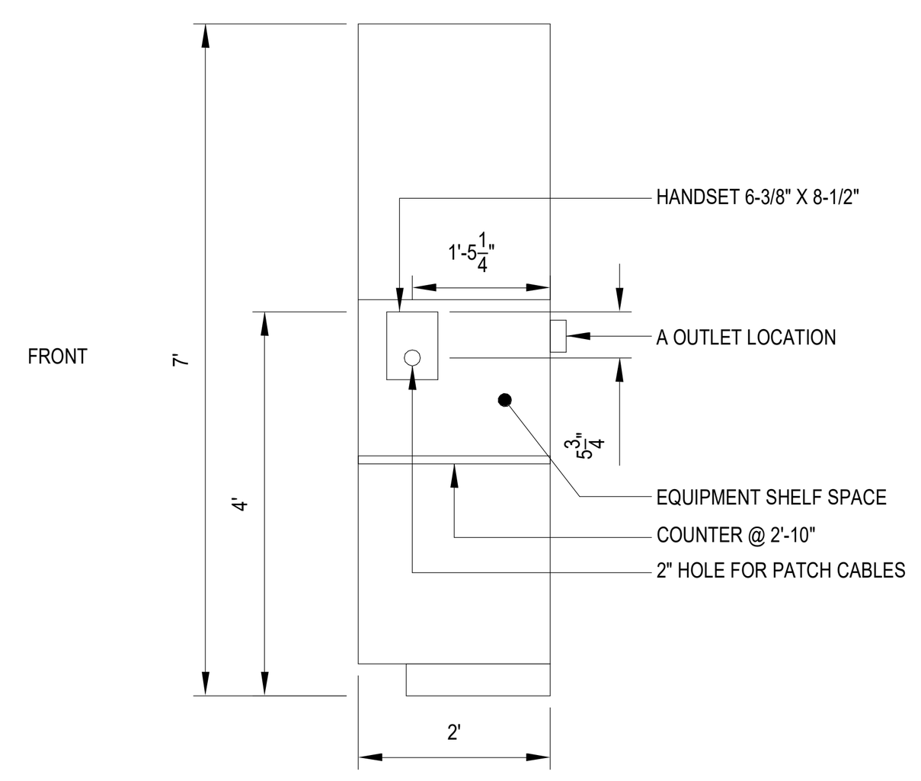
NOT TO SCALE



TYPICAL LIGHTING SUPPORT INSTALLATION

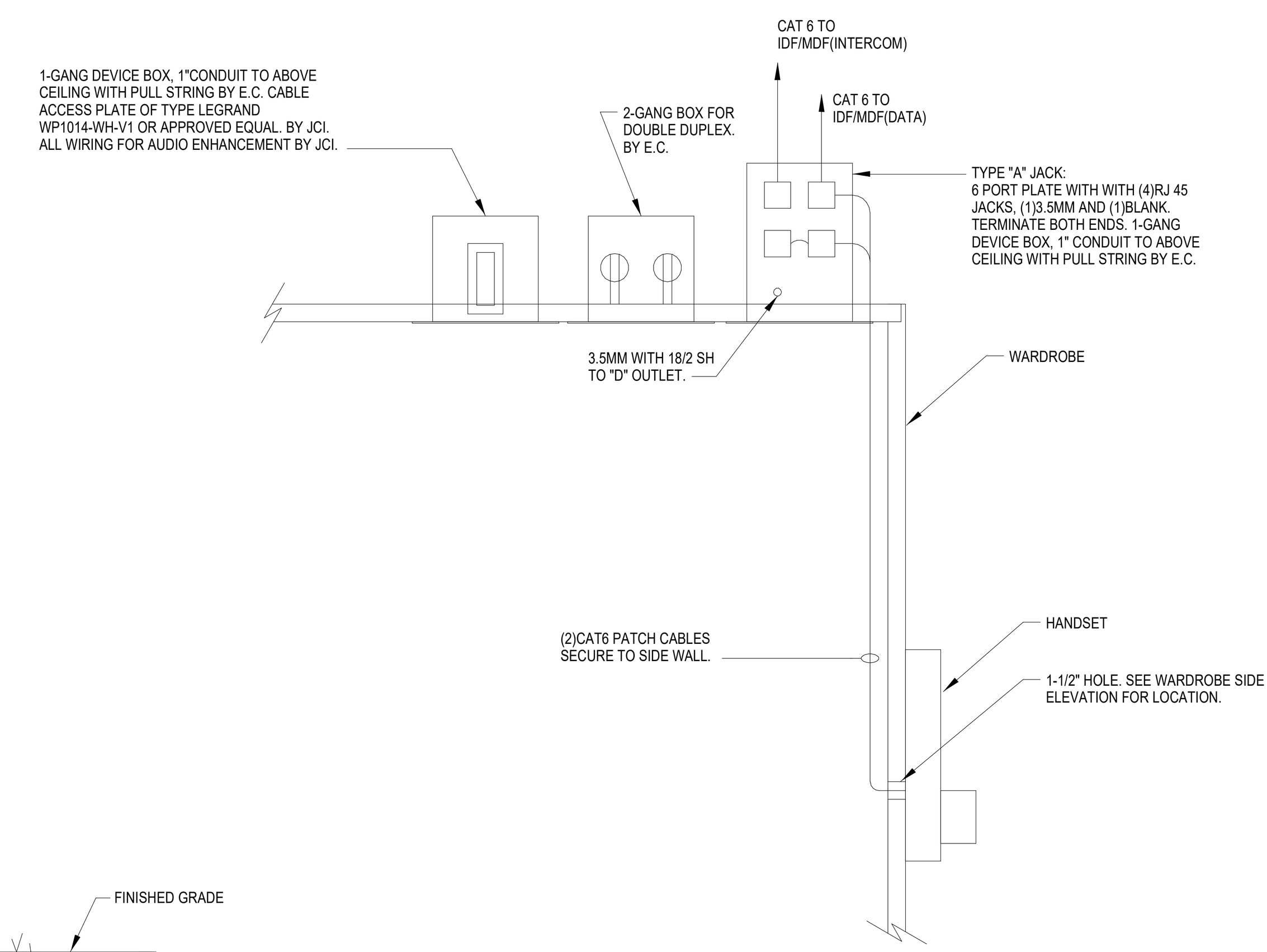
SCALE: NONE

NOTES:
1. ALL DIMENSIONS ARE TO CENTER LINE OF HOLE.
2. PATCH CABLES TO BE RUN INSIDE CABINET AND SECURED TO SIDE OF CABINET.
3. ALL WORK TO BE COORDINATED WITH APPROVED CASEWORK SHOP DRAWINGS AND INSTALLATION CONTRACTOR.



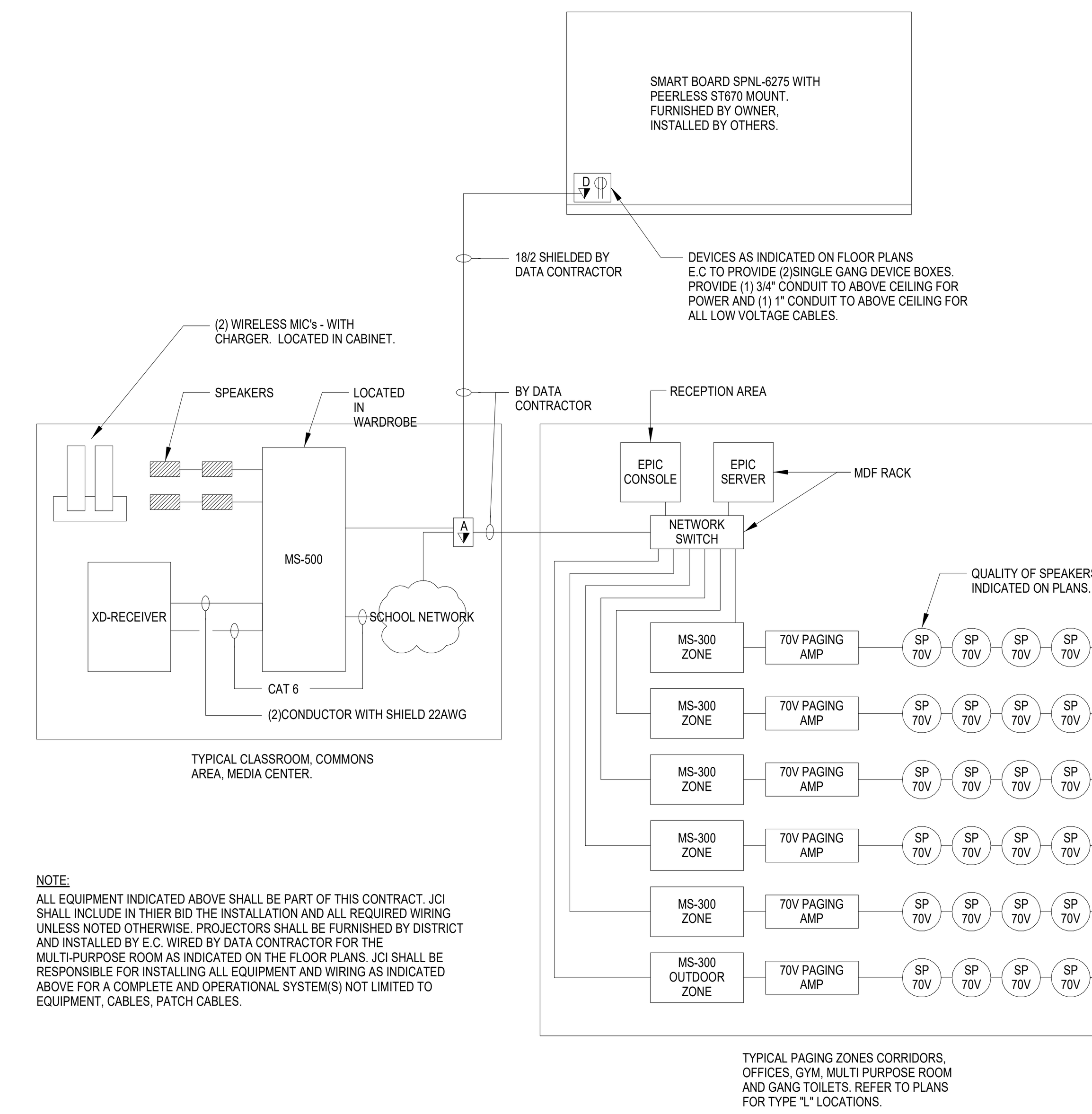
WARDROBE SIDE ELEVATION

SCALE: 1/8" = 1'-0"



PARTIAL INSIDE PLAN OF WARDROBE

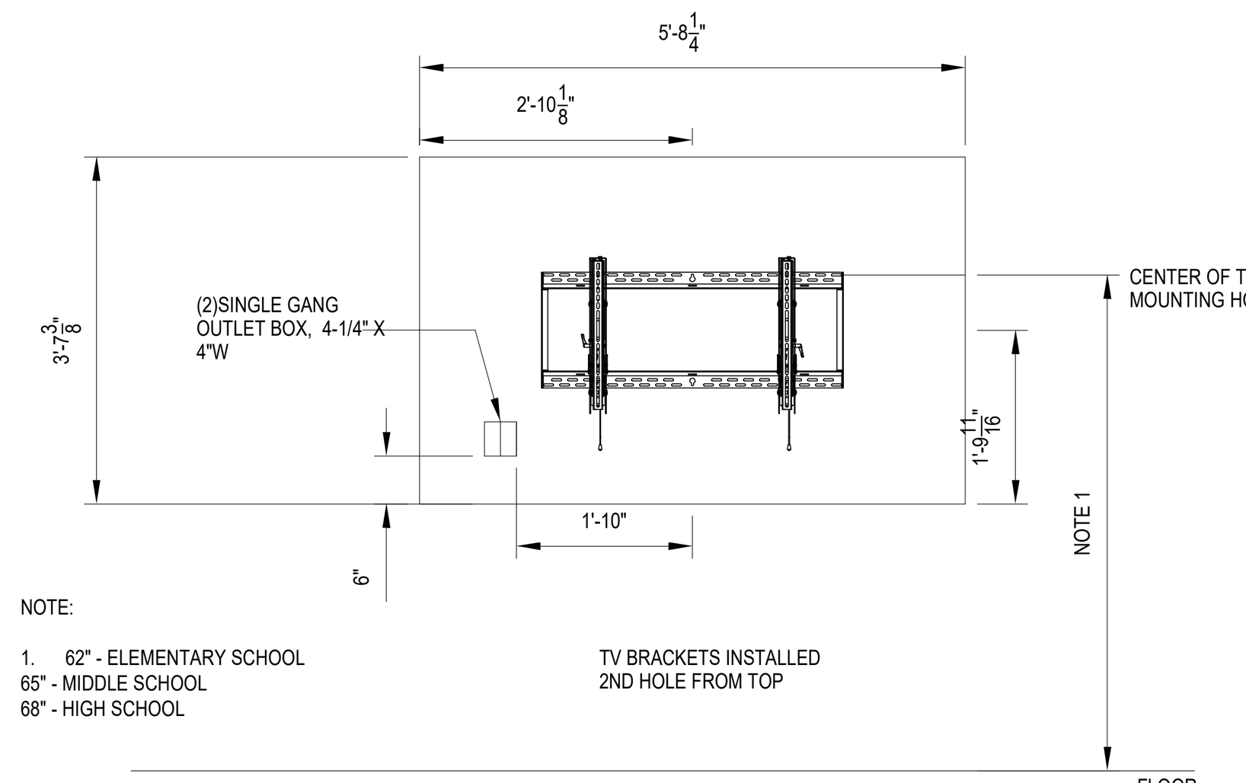
NOT TO SCALE



NOTE:
ALL EQUIPMENT INDICATED ABOVE SHALL BE PART OF THIS CONTRACT. JCI SHALL INCLUDE IN THEIR BID THE INSTALLATION AND ALL REQUIRED WIRING UNLESS NOTED OTHERWISE. PROJECTORS SHALL BE FURNISHED BY DISTRICT AND INSTALLED BY E.C. WIRED BY DATA CONTRACTOR FOR THE MULTI-PURPOSE ROOM AS INDICATED ON THE FLOOR PLANS. JCI SHALL BE RESPONSIBLE FOR INSTALLING ALL EQUIPMENT AND WIRING AS INDICATED ABOVE FOR A COMPLETE AND OPERATIONAL SYSTEM(S) NOT LIMITED TO EQUIPMENT, CABLES, PATCH CABLES.

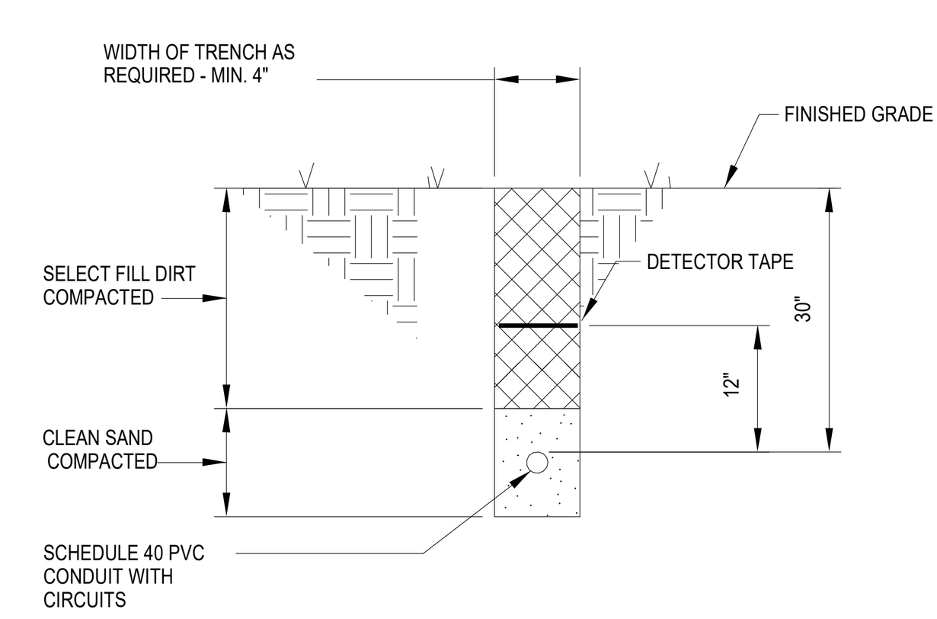
TYPICAL CLASSROOM SOUND/VIDEO SINGLE LINE DIAGRAM

SCALE: NOT TO SCALE



NOTE:
1. 62" - ELEMENTARY SCHOOL
66" - MIDDLE SCHOOL
68" - HIGH SCHOOL

TV BRACKETS INSTALLED 2ND HOLE FROM TOP



UNDERGROUND DIRECT BURIED CONDUIT

NOT TO SCALE

TYPICAL SMART TV DEVICE/MOUNTING ELEVATION

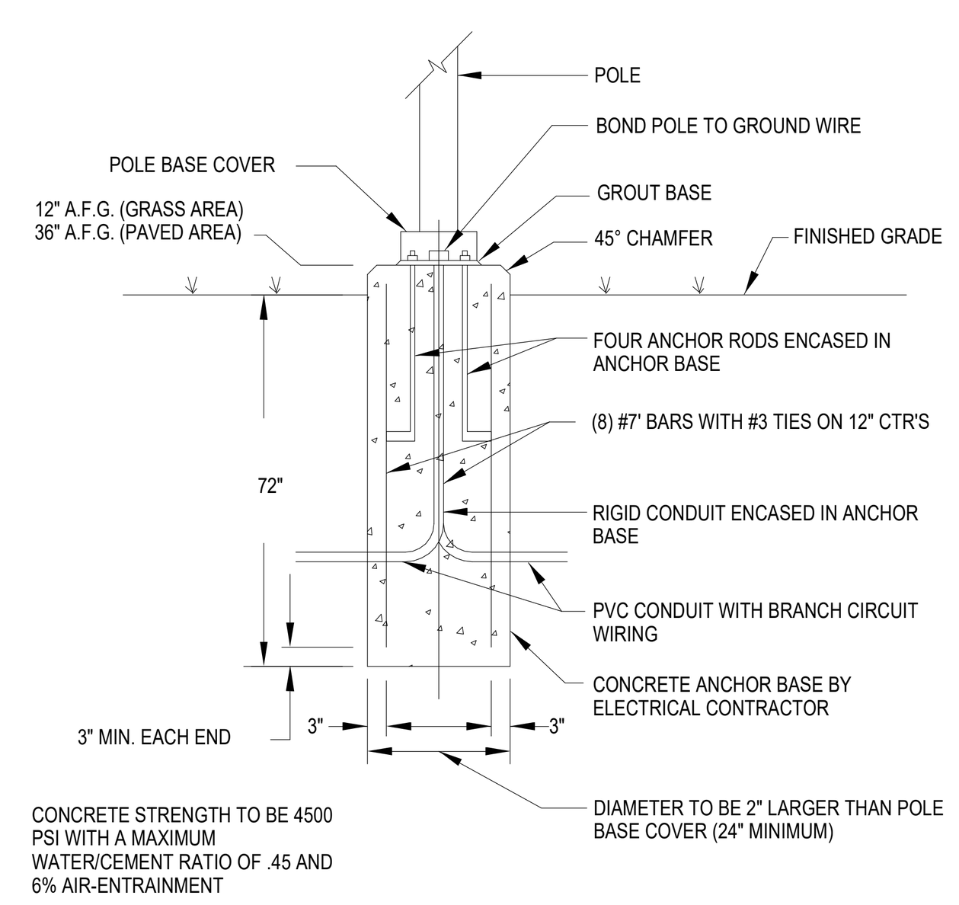
SCALE: 1/8" = 1'-0"

COMMUNICATIONS OUTLET CONFIGURATION							
ITEM	QUANTITY OF EACH TYPE OF CABLING SERVICE REQUIRED IN EACH OUTLET DESIGNATION E.C. SHALL PROVIDE DEVICE BOX, CONDUIT AND PULL STRING FOR ALL LOCATIONS IDENTIFIED BELOW. DATA CONTRACTOR TO PROVIDE ALL WIRING, PLATES AND FINAL TERMINATIONS AS IDENTIFIED BELOW.						
	CAT. 6 (VOICE) (A) TO (C) PATCH CABLE	CAT. 6 INTERCOM TO IDF/MDF	CAT. 6 (DATA) TO IDF	18/2 SH. 3.5MM (D) TO (A)	CAT. 6 (VOIP/DATA) TO IDF	CAT. 6 SHIELDED (VIDEO) (G) TO (J)	CAT. 6 SHIELDED (VIDEO) (H) TO (J)
(A)	1	1	1	1	0	0	0
(B)	0	0	2	0	0	0	0
(C)	2	0	0	0	0	0	0
(D)	0	0	1	1	0	0	0
(E)	0	0	0	0	1	0	0
(F)	0	0	1	0	0	0	0
(G)	0	0	1	0	0	1	0
(H)	0	0	1	0	0	0	1
(J)	0	0	1	0	0	1	1
(K)	0	0	0	0	0	0	0
(L)	0	1	0	0	0	0	0

NOTES:
1. NUMBER PROCEEDING THE ITEM DESIGNATION INDICATES QUANTITY.
2. WIRELESS ACCESS POINT FURNISHED BY OWNER INSTALLED AND WIRED BY DATA CONTRACTOR.
3. ALL PULL STRINGS ARE TO BE MAINTAINED THROUGH OUT THE PROJECT AND TO REMAIN FOR FUTURE USE BY OWNER.
4. DATA CONTRACTOR TO PROVIDE EXTRON DTP-T-HWP-4K-231-D AT EACH (H) LOCATION AND MAKE ALL FINAL CONNECTIONS.
5. DATA CONTRACTOR TO PROVIDE EXTRON DTP-R-HWP-4K-231-D AT (G) AND MAKE ALL FINAL CONNECTIONS.
6. DATA CONTRACTOR TO PROVIDE RXTRON IN1608XI SWITCHED IN RACK AND MAKE ALL FINAL CONNECTIONS. COORDINATE ALL WORK WITH JCI.

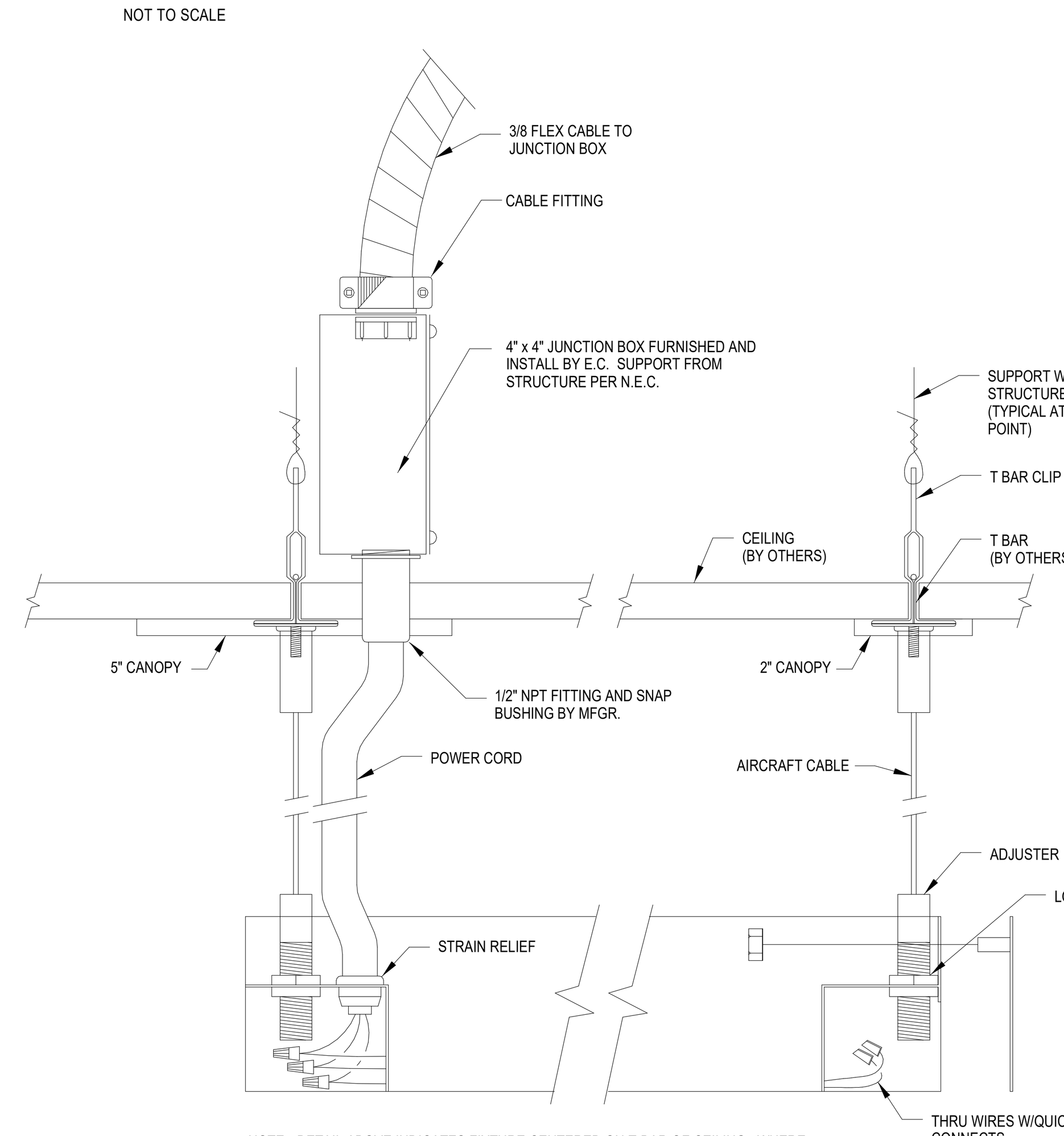
COLOR CHART

VOICE	RED	INTERCOM	GREEN
DATA	BLUE	FIRE ALARM	RED
CCTV	PURPLE	FIBER	ORANGE



REINFORCED ANCHOR BASE FOR FIXTURES IN GRASS AREAS

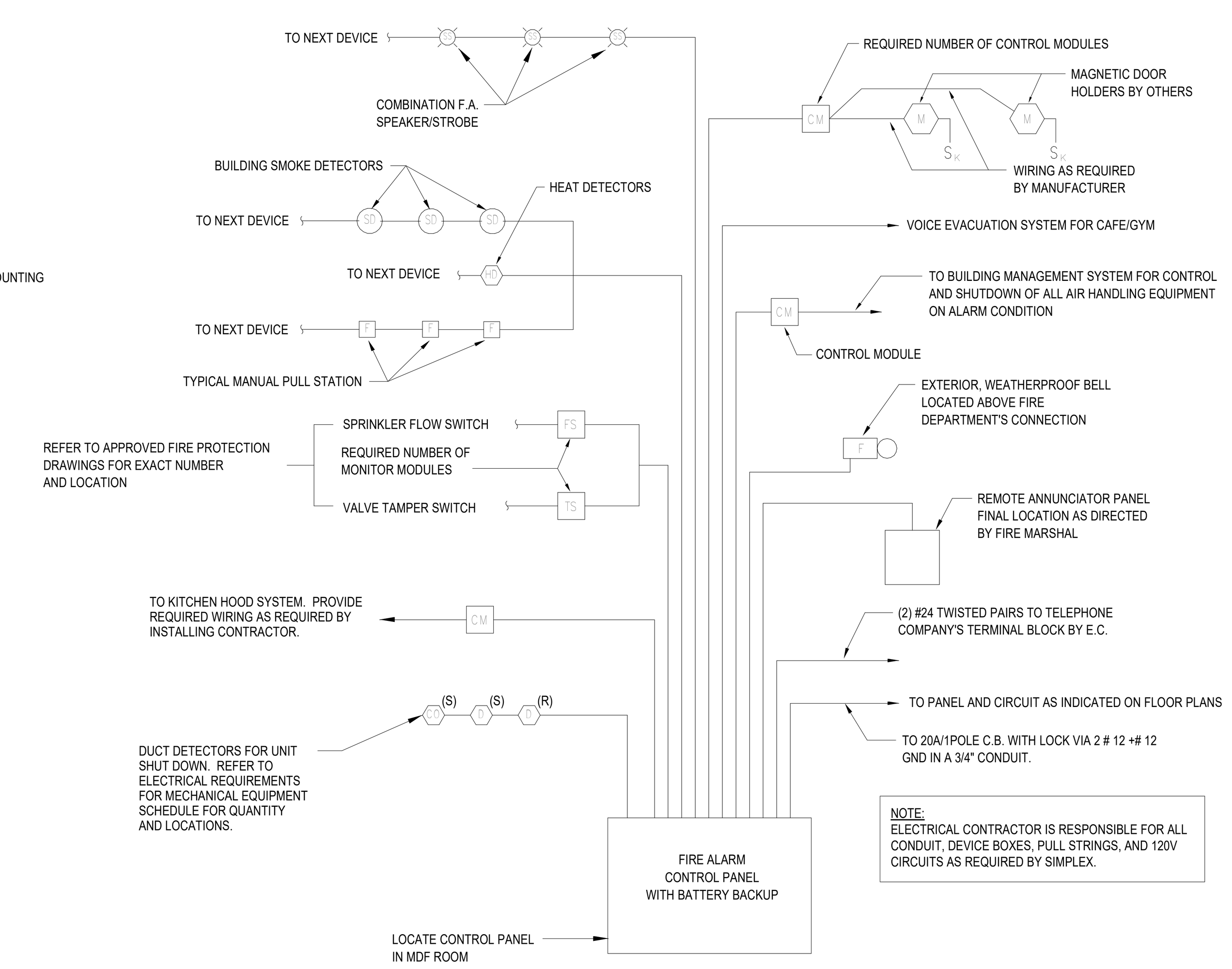
NOT TO SCALE



NOTE: DETAIL ABOVE INDICATES FIXTURE CENTERED ON T-BAR OF CEILING. WHERE FIXTURE IS INDICATED TO BE BETWEEN T-BARS, E.C. SHALL FURNISH AND INSTALL ALL REQUIRED JUNCTION BOXES WITH SADDLE BARS REQUIRED FOR ENTIRE RUN. JUNCTION BOXES TO BE SUPPORTED FROM STRUCTURE ABOVE BY E.C.. JUNCTION BOX WITH SADDLE BAR SHALL BE OF TYPE B-LINE MODEL No. BA50-SB OR APPROVED EQUAL.

T-BAR CEILING INTERFACE

NOT TO SCALE (TYPE "A" FIXTURE)



NOTE:
ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL CONDUIT, DEVICE BOXES, PULL STRINGS, AND 120V CIRCUITS AS REQUIRED BY SIMPLEX.

FIRE ALARM SINGLE LINE DIAGRAM

SCALE: NONE

20.013
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DETAILS - ELECTRICAL

THE NEW:
BRICK MILL EARLY CHILDHOOD CENTER
APPOQUINIMINK SCHOOL DISTRICT
NEW CASTLE COUNTY, DELAWARE

AGENCY NAME
AGENCY PROJ #

REV#	REVISION DATE
1	07/14/2020

DRAWN BY	YHW
PROJECT NO.	2001
SHEET NO.	E5.1
DATE	06/23/2020

LIGHT FIXTURE SCHEDULE

NOTES:

1. EQUIVALENT FIXTURE PACKAGES MAY BE SUBMITTED FROM THESE LIGHTING REPRESENTATIVES: DIGITAL ELEMENTS, DIVERSIFIED LIGHTING, ILLUMINATIONS, LIGHTING SOLUTIONS, AND PENN LIGHTING. FIXTURES SUBMITTED AS EQUIVALENTS SHALL BE OF THE SAME TYPE, DIMENSION, ACCESS TO BALLASTS, DRIVERS, AND LAMPS, PERFORMANCE AND QUALITY OF THOSE SPECIFIED. EQUIVALENT MANUFACTURERS MUST MEET ALL CRITERIA OF THE BASE FIXTURE SPECIFIED. ANY DEVIATIONS WHICH DO NOT REFLECT THE BASE FIXTURE WILL RESULT IN A REJECTED SHOP DRAWING DURING SUBMITTAL PERIOD.

2. ALL FIXTURE COLORS, FINISHES, AND MOUNTING HEIGHTS SHALL BE VERIFIED WITH THE ARCHITECT PRIOR TO APPROVAL OF SHOP DRAWINGS.

3. ALL LED DRIVERS SHALL BE INTEGRAL HIGH EFFICIENCY UNIVERSAL INPUT VOLTAGE DRIVERS, RATED FOR 50,000 HOURS AT 70% LUMEN MAINTENANCE, UNLESS NOTED OTHERWISE.

4. PROVIDE AS PART OF THE BASE BID FIVE ADDITIONAL EXIT SIGNS OF TYPE "X" FULLY INSTALLED AND WIRED. FOR BIDDING PURPOSES PROVIDE TWENTY FEET OF WIRE AND CONDUIT FOR EACH EXTRA EXIT SIGN. AT COMPLETION OF FIRE MARSHAL FINAL INSPECTION APPROVAL, EXTRA EXIT SIGNS NOT INSTALLED SHALL BE TURNED OVER TO THE OWNER AS SPARES AND ALL LABOR AND ASSOCIATED MATERIAL SHALL BE CREDITED TO THE OWNER.

5. CONNECT ALL EMERGENCY EXIT SIGNS TO THE LOCAL LIGHTING CIRCUIT AHEAD OF THE SWITCH CONTROL UNLESS NOTED OTHERWISE.

6. (E) LABEL ON LIGHT FIXTURES ON THE FLOOR PLANS INDICATES FIXTURE HAS EMERGENCY BATTERY. FOR ALL EMERGENCY FIXTURES, PROVIDE ADDITIONAL HOT SENSING LEG WIRE TO EMERGENCY BATTERY DRIVERS OR BALLASTS FROM LOCAL LIGHTING CIRCUIT AHEAD OF SWITCH CONTROL.

7. ALL EMERGENCY LIGHT FIXTURES SHALL BE PROVIDED WITH TEST SWITCHES. TEST SWITCHES SHALL BE INTEGRAL TO THE FIXTURE WHERE POSSIBLE. IF TEST SWITCHES MUST BE SEPARATE, THEY SHALL BE MOUNTED ON A LOCAL WALL CLOSEST TO THE EMERGENCY FIXTURE, 6' A.F.F. WHEREVER POSSIBLE, TEST SWITCHES MAY BE COMBINED OR GANGED. COORDINATE FINAL LOCATIONS AND LAYOUTS OF ALL TEST SWITCHES WITH ARCHITECT AND OWNER PRIOR TO INSTALLATION. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION AND ALL FINAL CONNECTIONS.

TYPE	MANUFACTURER	CATALOG NUMBER	LAMPS	MOUNTING	OPERATING VOLTAGE	REMARKS	MANUFACTURER	CATALOG NUMBER
A	LITELINE	LEDP-24-WH-40-50-120/277	50W LED, 4000°K, 6320 LUMENS, CRI 80+	RECESSED, CEILING	120V	2'W X 4'L LED FLAT PANEL, ALUMINUM FRAME, T-BAR MOUNTING, OPAL PMMA LENS, 0-10V DIMMING.	COLUMBIA	SRP24-35HLHE-G-EDU
A(E)	LITELINE	LEDP-24-WH-EM-40-50-120/277	50W LED, 4000°K, 6320 LUMENS, CRI 80+	RECESSED, CEILING	120V	SAME AS TYPE "A" EXCEPT WITH EMERGENCY BATTERY BACKUP.	COLUMBIA	SRP24-35HLHE-G-EDU-ELL14
A2	LITELINE	LEDP-22-WH-40-30-120/277	30W LED, 3500°K, 3860 LUMENS, CRI 80+	RECESSED, CEILING	120V	SAME AS TYPE "A" EXCEPT WITH 2'L AND 30W LUMEN PACKAGE.	COLUMBIA	SRP22-35HL-EDU
A2(E)	LITELINE	LEDP-22-WH-EM-40-30-120/277	30W LED, 3500°K, 3860 LUMENS, CRI 80+	RECESSED, CEILING	120V	SAME AS TYPE "B" EXCEPT WITH EMERGENCY BATTERY BACKUP.	COLUMBIA	SRP22-35HL-EDU-ELL14
C	TECH LIGHTING	700-TD-X-X	10W LED, 3500°K, 800 LUMENS	PENDANT, CEILING	120V	5" DIA X 9"H DECORATIVE PENDANT, CYLINDRICAL GLASS SHADE, METAL HARDWARE, DIMMABLE, ADJUSTABLE CABLE. FINISH AS SELECTED BY ARCHITECT. PROVIDE E26 MEDIUM BASE A19 LED BULB WITH 800 LUMENS AND 3500°K COLOR TEMPERATURE.	CONTECH	CRS82430K-CRS8-XXXXX-XX
D	ATLANTIC	LED6-SYL20-35K-U/6LED10-WH	20W LED, 3500°K, 2000 LUMENS, CRI 80	RECESSED, CEILING	120V	6" LED OPEN DOWNLIGHT, UNIVERSAL MOUNTING BRACKETS, STANDARD 60° BEAM ANGLE, MATTE WHITE FINISH.	PRESCOLITE	LTR-6RD-H-ML20L-DM1/LTR-6RD-T-ML35K8WD-WC
D(E)	ATLANTIC	LED6-SYL20-35K-U-ILEM/6LED10-WH	20W LED, 3500°K, 2000 LUMENS, CRI 80	RECESSED, CEILING	120V	SAME AS TYPE "D" EXCEPT WITH EMERGENCY BATTERY BACKUP.	PRESCOLITE	LTR-6RD-H-ML20L-DM1EM/LTR-6RD-T-ML35K8WD-WC
F	METALUX	4SNLED-LD5-60HL-LC-UNV-L835-CD1-U	43W LED, 3500°K, 5920 LUMENS, CRI 80	CHAIN HUNG, CEILING	120V	4'L INDUSTRIAL LED, DIE-FORMED COLD ROLLED STEEL, DAMP LOCATION LISTED, CLEAR LENS, WHITE FINISH.	COLUMBIA	MPS4--35HL-CW-EU
F(E)	METALUX	4SNLED-LD5-60HL-LC-UNV-EL14W-L835-CD1-U	43W LED, 3500°K, 5920 LUMENS, CRI 80	CHAIN HUNG, CEILING	120V	SAME AS TYPE "F" EXCEPT WITH EMERGENCY BATTERY BACKUP.	COLUMBIA	MPS4--35HL-CW-EU-ELL14
G	AXIS	TB2DILED-500-500-80-35-SO-SO-XX-XX-UNV-DP-1-CT15(#)	10W LED, 3500°K, 1100 LUMENS, CRI 80 PER FEET	PENDANT, CEILING	120V	2-1/2"W X 3-7/8"H CONTINUOUS LINEAR/RECTANGULAR PENDANT, ALUMINUM HOUSING, SPOTLESS ACRYLIC LENS, 0-10V DIMMING, T-BAR SUSPENSION MOUNTING, AIRCRAFT CABLE. FINISH AS SELECTED BY ARCHITECT. REFER TO PLAN FOR FIXTURE LENGTH AND/OR SHAPE.	PINNACLE	EX2DI-A-HE-835-835-XX'-ACXXG1-U-OL1-1-0-XX
G(E)	AXIS	TB2DILED-500-500-80-35-SO-SO-XX-XX-UNV-DP-1-CT15(#)-B1	10W LED, 3500°K, 1100 LUMENS, CRI 80 PER FEET	PENDANT, CEILING	120V	SAME AS TYPE "G" EXCEPT WITH 4' SECTION WITH EMERGENCY BATTERY BACKUP.	PINNACLE	EX2DI-A-HE-835-835-XX'-ACXXG1-U-OL1-1-1IL-XX
H(E)	RAB LIGHTING	WPLED26W/EC/PC	29W LED, 4000°K, 3529 LUMENS, CRI 72	SURFACE, WALL	120V	9-7/8"W X 6-1/2"H X 12-3/8"D WALL PACK, PRECISION DIE CAST ALUMINUM HOUSING AND LENS FRAME, HIGH TEMPERATURE SILICONE GASKETS, CAST ALUMINUM THERMAL HEAT SINK, WHITE POLYESTER POWDER COAT FINISH, INTEGRAL PHOTOCELL, COLD WEATHER STARTING -40°C, UL LISTED FOR WET LOCATION.	HUBBELL	LNC2-12L-4K-035-4-U-WHT-PCU-EH
J	FAIL-SAFE	MPBL-2LD4-UNV-1/STD-2/STD-35-ED-C1	55W LED, 3500°K, 4,270 LUMENS, CRI 85	SURFACE, WALL	120V	2'L X 7-5/32"D X 3-3/16"H UP / DOWN BED LIGHT, ALUMINUM HOUSING AND END CAPS, DIFFUSE PRISMATIC ACRYLIC LENSES	WILLIAMS	WMAUD2-L40/835U-L40/835D-AF-UNV
K	ATLANTIC	6VUDWL-1-6081535-6081535-XX	30W LED, 3500°K, 2174 LUMENS, CRI 80	SURFACE, WALL	120V	6" DIA X 18"H WALL CYLINDER, ALUMINUM CONSTRUCTION, CLEAR OPTIC, WET LOCATION COVER, 60° UP/DOWN BEAM ANGLE, 0-10V DIMMING. FINISH AS SELECTED BY ARCHITECT.	CONTECH	CYL63L35KMVDUDXMCLR-XX
L	CORELITE	DSI-WS-50L-835-1D-UNV-STD-DC-X-ACXX-T1-XX	23W LED, 3500°K, 3000 LUMENS, CRI 85 PER 4' SECTION	PENDANT, CEILING AIECRAFT CABLE, 8' A.F.F. TO BOTTOM OF FIXTURE	120V	12"W X 1.7"H CONTINUOUS PENDANT, EXTRUDED ALUMINUM AND STEEL HOUSING, NO EXPOSED FASTENERS, ACRYLIC LENS, CLEAR FORMED POLYCARBONATE DUST COVER, STRAIGHT POWER CORD, PROVIDE CONTINUOUS LENGTHS AS SHOWN ON DRAWINGS.	ALERA	LP7-OA-XX'-35VW-100-CMXX"-EDU-XX
L(E)	CORELITE	DSI-WS-50L-835-1D-UNV-STD-EL14W-DC-X-ACXX-T1-XX	23W LED, 3500°K, 3000 LUMENS, CRI 85 PER 4' SECTION	PENDANT, CEILING AIECRAFT CABLE, 8' A.F.F. TO BOTTOM OF FIXTURE	120V	SAME AS TYPE "L" EXCEPT WITH 4' SECTION WITH EMERGENCY BATTERY BACKUP.	ALERA	LP7-OA-XX'-35VW-100-CMXX"-EDU-XX-ELL10
S	McGRAW EDISON	FIXTURES: TLM-E05-LED-208-T3-WH-PT POLE: SSS-5-M-30-S-W-M-1-G	132W LED, 3000°K, 15420 LUMENS, CRI 70	FIXTURE ARM MOUNTED 30' A.F.G. ON POLE, POLE GRASS MOUNTED	208V	16-1/4"W X 23-1/4"L X 8"H ARCHITECTURAL AREA LUMINAIRE, DIE-CAST ALUMINUM HOUSING, STAINLESS STEEL LATCHES AND HINGES, INJECTION MOLDED ACRYLIC REFLECTOR AND LENS, IES TYPE III DISTRIBUTION, FULL CUTOFF, POWER TRAY, 8"L EXTRUDED ALUMINUM ARM, 30'H X 5"W STRAIGHT SQUARE STEEL POLE, 0.188" WALL THICKNESS, DRILLED FOR SINGLE FIXTURE, 10-1/2" SQUARE STEEL BASE, FULL BASE COVER, 3"W X 5"H HANDHOLE, TAMPER RESISTANT SCREWS, GROUND LUG, WHITE FINISH, UL LISTED FOR WET LOCATION.	HUBBELL	FIXTURES: RAR1-160L-115-3K7-3-UNV-ASQ-WHT POLE: SSS-30-40-B-1-B3-WHT-UL
S2	McGRAW EDISON	FIXTURES: TLM-E05-LED-208-T4-WH-PT POLE: SSS-5-M-30-S-W-M-1-G	(2)132W LED, 3000°K, 15110 LUMENS, CRI 70	TWO FIXTURES ARM MOUNTED AT 180° 30' A.F.G. ON POLE, POLE GRASS MOUNTED	208V	SAME AS TYPE "S" EXCEPT WITH TYPE IV DISTRIBUTION AND TWO FIXTURES AT 180°.	HUBBELL	FIXTURES: RAR1-160L-115-3K7-3-UNV-ASQ-WHT POLE: SSS-30-40-B-2-B3-WHT-UL
X	SURE-LITES	CX7-(1/2)-70-R-W-SD-WG10	LED, FURNISHED WITH FIXTURE	SURFACE, CEILING/WALL/END	120V	EMERGENCY EXIT SIGN, DIE CAST ALUMINUM HOUSING AND CANOPY, SINGLE/DOUBLE FACE EXIT SIGN, RED LETTERS, WHITE HOUSING FINISH, EVEN ILLUMINATED LEDS, SELF CONTAINED NICKEL CADIUM BATTERY SELF DIAGNOSTICS.	DUAL LITE	SES/DRWE

MECHANICAL EQUIPMENT ELECTRICAL REQUIREMENTS (ALT. BID 1)

ITEM	DESCRIPTION	VOLTAGE	LOAD	CIRCUIT BREAKER	WIRING	COMBINATION STARTER AND/OR DISCONNECT SWITCH	PANEL-CIRCUIT NUMBER	REMARKS
HP-B9	HEAT PUMP	208V 3□	28A	30A 3P	3#10+#10-3/4"C	30A 3P NON-FUSED DISCONNECT SWITCH	PP-4(1)-45	
ACC-B9	OUTDOOR CONDENSING UNIT	208V 1□	17A	25A 2P	2#10+#10-3/4"C	30A 2P NEMA 3R NON-FUSED DISCONNECT SWITCH	PP-4(1)-51	
HP-B10	HEAT PUMP	208V 3□	28A	30A 3P	3#10+#10-3/4"C	30A 3P NON-FUSED DISCONNECT SWITCH	PP-4(2)-8	
ACC-B10	OUTDOOR CONDENSING UNIT	208V 1□	17A	25A 2P	2#10+#10-3/4"C	30A 2P NEMA 3R NON-FUSED DISCONNECT SWITCH	PP-4(2)-14	
HP-B11	HEAT PUMP	208V 1□	1.45A	15A 2P	2#12+#12-3/4"C	30A 2P NON-FUSED DISCONNECT SWITCH	PP-4(1)-48	
ACC-B11	OUTDOOR CONDENSING UNIT	208V 1□	11A	30A 2P	2#10+#10-3/4"C	30A 2P NEMA 3R NON-FUSED DISCONNECT SWITCH	PP-4(1)-52	
HP-B12	HEAT PUMP	208V 3□	28A	30A 3P	3#10+#10-3/4"C	30A 3P NON-FUSED DISCONNECT SWITCH	PP-4(2)-18	
ACC-B12	OUTDOOR CONDENSING UNIT	208V 1□	17A	25A 2P	2#10+#10-3/4"C	30A 2P NEMA 3R NON-FUSED DISCONNECT SWITCH	PP-4(2)-24	
HP-B13	HEAT PUMP	208V 3□	28A	30A 3P	3#10+#10-3/4"C	30A 3P NON-FUSED DISCONNECT SWITCH	PP-4(2)-25	
ACC-B13	OUTDOOR CONDENSING UNIT	208V 1□	17A	25A 2P	2#10+#10-3/4"C	30A 2P NEMA 3R NON-FUSED DISCONNECT SWITCH	PP-4(2)-31	
ECH-B2	ELECTRIC CABINET HEATER	208V 3□	3.0KW	15A 3P	3#12+#12-3/4"C	FACTORY FURNISHED	PP-4(1)-42	

NOTES:
1. WIRE PER SPLIT SYSTEM MANUFACTURER. THE INDOOR UNIT AND OUTDOOR UNIT ARE FED FROM A COMMON CIRCUIT. WIRE AS DIRECTED IN INSTALLATION GUIDE.

MECHANICAL EQUIPMENT ELECTRICAL REQUIREMENTS (ALT. BID 2)

ITEM	DESCRIPTION	VOLTAGE	LOAD	CIRCUIT BREAKER	WIRING	COMBINATION STARTER AND/OR DISCONNECT SWITCH	PANEL-CIRCUIT NUMBER	REMARKS
HP-A17	HEAT PUMP	208V 3□	28A	30A 3P	3#10+#10-3/4"C	30A 3P NON-FUSED DISCONNECT SWITCH	PP-3(2)-8	
ACC-A17	OUTDOOR CONDENSING UNIT	208V 1□	17A	25A 2P	2#10+#10-3/4"C	30A 2P NEMA 3R NON-FUSED DISCONNECT SWITCH	PP-3(2)-14	
HP-A18	HEAT PUMP	208V 3□	28A	30A 3P	3#10+#10-3/4"C	30A 3P NON-FUSED DISCONNECT SWITCH	PP-3(2)-11	
ACC-A18	OUTDOOR CONDENSING UNIT	208V 1□	17A	25A 2P	2#10+#10-3/4"C	30A 2P NEMA 3R NON-FUSED DISCONNECT SWITCH	PP-3(2)-17	
ERU-A1	ENERGY RECOVERY UNIT	208V 3□	39A	50A 3P	3#8+#10-3/4"C	FACTORY FURNISHED	PP-3(2)-18	2
ECH-A9	ELECTRIC CABINET HEATER	208V 1□	3.0KW	15A 3P	3#12+#12-3/4"C	FACTORY FURNISHED	PP-3(2)-21	
ECH-A10	ELECTRIC CABINET HEATER	208V 1□	3.0KW	15A 3P	3#12+#12-3/4"C	FACTORY FURNISHED	PP-3(2)-24	

NOTES:
1. WIRE PER SPLIT SYSTEM MANUFACTURER. THE INDOOR UNIT AND OUTDOOR UNIT ARE FED FROM A COMMON CIRCUIT. WIRE AS DIRECTED IN INSTALLATION GUIDE.
2. ELECTRICAL CONTRACTOR SHALL FURNISH (2) FIRE ALARM DUCT DETECTORS TO THE MECHANICAL CONTRACTOR FOR INSTALLATION. (1) FOR SUPPLY AND (1) FOR RETURN. UPON COMPLETION OF INSTALLATION E.C. SHALL BE RESPONSIBLE FOR ALL FINAL CONNECTIONS TO UNIT AND FIRE ALARM CONTROL PANEL FOR UNIT SHUT DOWN. NOTE: REFER TO MECHANICAL'S PLANS FOR EXTERIOR APPLICATIONS ROOF PLAN.

MECHANICAL EQUIPMENT ELECTRICAL REQUIREMENTS (ALT. BID 3)

ITEM	DESCRIPTION	VOLTAGE	LOAD	CIRCUIT BREAKER	WIRING	COMBINATION STARTER AND/OR DISCONNECT SWITCH	PANEL-CIRCUIT NUMBER	REMARKS
HP-B14	HEAT PUMP	208V 3□	28A	30A 3P	3#10+#10-3/4"C	30A 3P NON-FUSED DISCONNECT SWITCH	PP-4(2)-12	
ACC-B14	OUTDOOR CONDENSING UNIT	208V 1□	17A	25A 2P	2#10+#10-3/4"C	30A 2P NEMA 3R NON-FUSED DISCONNECT SWITCH	PP-4(2)-18	
HP-B15	HEAT PUMP	208V 3□	28A	30A 3P	3#10+#10-3/4"C	30A 3P NON-FUSED DISCONNECT SWITCH	PP-4(2)-21	
ACC-B15	OUTDOOR CONDENSING UNIT	208V 1□	17A	25A 2P	2#10+#10-3/4"C	30A 2P NEMA 3R NON-FUSED DISCONNECT SWITCH	PP-4(2)-27	
ERU-B1	ENERGY RECOVERY UNIT	208V 3□	32.9A	45A 3P	3#8+#10-3/4"C	FACTORY FURNISHED	PP-4(2)-22	2
ECH-A3	ELECTRIC CABINET HEATER	208V 1□	3.0KW	15A 3P	3#12+#12-3/4"C	FACTORY FURNISHED	PP-3(2)-27	
ECH-A4	ELECTRIC CABINET HEATER	208V 1□	3.0KW	15A 3P	3#12+#12-3/4"C	FACTORY FURNISHED	PP-3(2)-30	

NOTES:
1. WIRE PER SPLIT SYSTEM MANUFACTURER. THE INDOOR UNIT AND OUTDOOR UNIT ARE FED FROM A COMMON CIRCUIT. WIRE AS DIRECTED IN INSTALLATION GUIDE.
2. ELECTRICAL CONTRACTOR SHALL FURNISH (2) FIRE ALARM DUCT DETECTORS TO THE MECHANICAL CONTRACTOR FOR INSTALLATION. (1) FOR SUPPLY AND (1) FOR RETURN. UPON COMPLETION OF INSTALLATION E.C. SHALL BE RESPONSIBLE FOR ALL FINAL CONNECTIONS TO UNIT AND FIRE ALARM CONTROL PANEL FOR UNIT SHUT DOWN. NOTE: REFER TO MECHANICAL'S PLANS FOR EXTERIOR APPLICATIONS ROOF PLAN.

MECHANICAL EQUIPMENT ELECTRICAL REQUIREMENTS

ITEM	DESCRIPTION	VOLTAGE	LOAD	CIRCUIT BREAKER	WIRING	COMBINATION STARTER AND/OR DISCONNECT SWITCH	PANEL-CIRCUIT NUMBER	REMARKS
RTU-1	ROOFTOP UNIT	208V 3□	44A	50A 3P	3#8+#10G - 3/4"C	FACTORY FURNISHED STARTER AND DISCONNECT	PP-1-1	2
RTU-2	ROOFTOP UNIT	208V 1□	23A	35A 2P	2#8+#10G - 3/4"C	FACTORY FURNISHED STARTER AND DISCONNECT	PP-2(1)-1	
HP-A1	HEAT PUMP	208V 3□	28A	30A 3P	3#10+#10-3/4"C	30A 3P NON-FUSED DISCONNECT SWITCH	PP-3(1)-1	
ACC-A1	OUTDOOR CONDENSING UNIT	208V 1□	17A	25A 2P	2#10+#10-3/4"C	30A 2P NEMA 3R NON-FUSED DISCONNECT SWITCH	PP-3(1)-7	
HP-A2	HEAT PUMP	208V 3□	28A	30A 3P	3#10+#10-3/4"C	30A 3P NON-FUSED DISCONNECT SWITCH	PP-3(1)-2	
ACC-A2	OUTDOOR CONDENSING UNIT	208V 1□	17A	25A 2P	2#10+#10-3/4"C	30A 2P NEMA 3R NON-FUSED DISCONNECT SWITCH	PP-3(1)-8	
HP-A3	HEAT PUMP	208V 3□	28A	30A 3P	3#10+#10-3/4"C	30A 3P NON-FUSED DISCONNECT SWITCH	PP-3(1)-11	
ACC-A3	OUTDOOR CONDENSING UNIT	208V 1□	17A	25A 2P	2#10+#10-3/4"C	30A 2P NEMA 3R NON-FUSED DISCONNECT SWITCH	PP-3(1)-17	
HP-A4	HEAT PUMP	208V 3□	28A	30A 3P	3#10+#10-3/4"C	30A 3P NON-FUSED DISCONNECT SWITCH	PP-3(1)-12	
ACC-A4	OUTDOOR CONDENSING UNIT	208V 1□	17A	25A 2P	2#10+#10-3/4"C	30A 2P NEMA 3R NON-FUSED DISCONNECT SWITCH	PP-3(1)-18	
HP-A5	HEAT PUMP	208V 3□	28A	30A 3P	3#10+#10-3/4"C	30A 3P NON-FUSED DISCONNECT SWITCH	PP-2(1)-5	
ACC-A5	OUTDOOR CONDENSING UNIT	208V 1□	17A	25A 2P	2#10+#10-3/4"C	30A 2P NEMA 3R NON-FUSED DISCONNECT SWITCH	PP-2(1)-11	
HP-A6	HEAT PUMP	208V 3□	28A	30A 3P	3#10+#10-3/4"C	30A 3P NON-FUSED DISCONNECT SWITCH	PP-3(1)-21	
ACC-A6	OUTDOOR CONDENSING UNIT	208V 1□	17A	25A 2P	2#10+#10-3/4"C	30A 2P NEMA 3R NON-FUSED DISCONNECT SWITCH	PP-3(1)-27	
HP-A7	HEAT PUMP	208V 3□	28A	30A 3P	3#10+#10-3/4"C	30A 3P NON-FUSED DISCONNECT SWITCH	PP-3(1)-22	
ACC-A7	OUTDOOR CONDENSING UNIT	208V 1□	17A	25A 2P	2#10+#10-3/4"C	30A 2P NEMA 3R NON-FUSED DISCONNECT SWITCH	PP-3(1)-28	
HP-A8	HEAT PUMP	208V 3□	28A	30A 3P	3#10+#10-3/4"C	30A 3P NON-FUSED DISCONNECT SWITCH	PP-3(1)-31	
ACC-A8	OUTDOOR CONDENSING UNIT	208V 1□	17A	25A 2P	2#10+#10-3/4"C	30A 2P NEMA 3R NON-FUSED DISCONNECT SWITCH	PP-3(1)-37	
HP-A9	HEAT PUMP	208V 3□	28A	30A 3P	3#10+#10-3/4"C	30A 3P NON-FUSED DISCONNECT SWITCH	PP-3(1)-32	
ACC-A9	OUTDOOR CONDENSING UNIT	208V 1□	17A	25A 2P	2#10+#10-3/4"C	30A 2P NEMA 3R NON-FUSED DISCONNECT SWITCH	PP-3(1)-38	
HP-A10	HEAT PUMP	208V 3□	28A	30A 3P	3#10+#10-3/4"C	30A 3P NON-FUSED DISCONNECT SWITCH	PP-3(2)-1	
ACC-A10	OUTDOOR CONDENSING UNIT	208V 1□	17A	25A 2P	2#10+#10-3/4"C	30A 2P NEMA 3R NON-FUSED DISCONNECT SWITCH	PP-3(2)-7	
HP-A11	HEAT PUMP	208V 1□	1.45A	15A 2P	2#12+#12-3/4"C	30A 2P NON-FUSED DISCONNECT SWITCH	PP-2(1)-6	
ACC-A11	OUTDOOR CONDENSING UNIT	208V 1□	14A	25A 2P	2#10+#10-3/4"C	30A 2P NEMA 3R NON-FUSED DISCONNECT SWITCH	PP-2(1)-10	
HP-A12	HEAT PUMP	208V 3□	44A	45A 3P	3#8+#10-3/4"C	30A 3P NON-FUSED DISCONNECT SWITCH	PP-2(1)-15	
ACC-A12	OUTDOOR CONDENSING UNIT	208V 1□	26A	45A 2P	2#8+#10-3/4"C	30A 2P NEMA 3R NON-FUSED DISCONNECT SWITCH	PP-2(1)-21	
HP-A13	HEAT PUMP	208V 1□	1.45A	15A 2P	2#12+#12-3/4"C	30A 2P NON-FUSED DISCONNECT SWITCH	PP-2(1)-14	
ACC-A13	OUTDOOR CONDENSING UNIT	208V 1□	14A	25A 2P	2#10+#10-3/4"C	30A 2P NEMA 3R NON-FUSED DISCONNECT SWITCH	PP-2(1)-18	
HP-A14	HEAT PUMP	208V 1□	1.45A	15A 2P	2#12+#12-3/4"C	30A 2P NON-FUSED DISCONNECT SWITCH	PP-2(1)-25	
ACC-A14	OUTDOOR CONDENSING UNIT	208V 1□	14A	25A 2P	2#10+#10-3/4"C	30A 2P NEMA 3R NON-FUSED DISCONNECT SWITCH	PP-2(1)-29	
HP-A15	HEAT PUMP	208V 3□	28A	30A 3P	3#10+#10-3/4"C	30A 3P NON-FUSED DISCONNECT SWITCH	PP-2(1)-22	
ACC-A15	OUTDOOR CONDENSING UNIT	208V 1□	12A	20A 2P	2#12+#12-3/4"C	30A 2P NEMA 3R NON-FUSED DISCONNECT SWITCH	PP-2(1)-28	
HP-A16	HEAT PUMP	208V 3□	30A	30A 3P	3#10+#10-3/4"C	30A 3P NON-FUSED DISCONNECT SWITCH	PP-2(1)-33	
ACC-A16	OUTDOOR CONDENSING UNIT	208V 1□	18A	30A 2P	2#10+#10-3/4"C	30A 2P NEMA 3R NON-FUSED DISCONNECT SWITCH	PP-2(1)-39	
AC-A1	INDOOR COOLING UNIT	208V 1□	-	-	PER MANUFACTURER REQUIREMENT	2P MANUAL TOGGLE	PP-2(1)-2	
ACC-A19	OUTDOOR CONDENSING UNIT	208V 1□	25A	30A 2P	2#10+#10-3/4"C	30A 2P NEMA 3R NON-FUSED DISCONNECT SWITCH		
HP-B1	HEAT PUMP	208V 3□	28A	30A 3P	3#10+#10-3/4"C	30A 3P NON-FUSED DISCONNECT SWITCH	PP-4(1)-1	
ACC-B1	OUTDOOR CONDENSING UNIT	208V 1□	17A	25A 2P	2#10+#10-3/4"C	30A 2P NEMA 3R NON-FUSED DISCONNECT SWITCH	PP-4(1)-7	
HP-B2	HEAT PUMP	208V 3□	28A	30A 3P	3#10+#10-3/4"C	30A 3P NON-FUSED DISCONNECT SWITCH	PP-4(1)-2	
ACC-B2	OUTDOOR CONDENSING UNIT	208V 1□	17A	25A 2P	2#10+#10-3/4"C	30A 2P NEMA 3R NON-FUSED DISCONNECT SWITCH	PP-4(1)-8	
HP-B3	HEAT PUMP	208V 3□	28A	30A 3P	3#10+#10-3/4"C	30A 3P NON-FUSED DISCONNECT SWITCH	PP-4(1)-11	
ACC-B3	OUTDOOR CONDENSING UNIT	208V 1□	17A	25A 2P	2#10+#10-3/4"C	30A 2P NEMA 3R NON-FUSED DISCONNECT SWITCH	PP-4(1)-17	
HP-B4	HEAT PUMP	208V 3□	28A	30A 3P	3#10+#10-3/4"C	30A 3P NON-FUSED DISCONNECT SWITCH	PP-4(1)-12	
ACC-B4	OUTDOOR CONDENSING UNIT	208V 1□	17A	25A 2P	2#10+#10-3/4"C	30A 2P NEMA 3R NON-FUSED DISCONNECT SWITCH	PP-4(1)-18	
HP-B5	HEAT PUMP	208V 1□	1.45A	15A 2P	2#12+#12-3/4"C	30A 2P NON-FUSED DISCONNECT SWITCH	PP-4(1)-21	
ACC-B5	OUTDOOR CONDENSING UNIT	208V 1□	11A	30A 2P	2#10+#10-3/4"C	30A 2P NEMA 3R NON-FUSED DISCONNECT SWITCH	PP-4(1)-25	
HP-B6	HEAT PUMP	208V 3□	28A	30A 3P	3#10+#10-3/4"C	30A 3P NON-FUSED DISCONNECT SWITCH	PP-4(1)-22	
ACC-B6	OUTDOOR CONDENSING UNIT	208V 1□	17A	25A 2P	2#10+#10-3/4"C	30A 2P NEMA 3R NON-FUSED DISCONNECT SWITCH	PP-4(1)-28	
HP-B7	HEAT PUMP	208V 3□	28A	30A 3P	3#10+#10-3/4"C	30A 3P NON-FUSED DISCONNECT SWITCH	PP-4(1)-29	
ACC-B7	OUTDOOR CONDENSING UNIT	208V 1□	17A	25A 2P	2#10+#10-3/4"C	30A 2P NEMA 3R NON-FUSED DISCONNECT SWITCH	PP-4(1)-35	
HP-B8	HEAT PUMP	208V 3□	28A	30A 3P	3#10+#10-3/4"C	30A 3P NON-FUSED DISCONNECT SWITCH	PP-4(1)-32	
ACC-B8	OUTDOOR CONDENSING UNIT	208V 1□	17A	25A 2P	2#10+#10-3/4"C	30A 2P NEMA 3R NON-FUSED DISCONNECT SWITCH	PP-4(1)-38	
EF-A1	EXHAUST FAN	120V	1/4HP	20A 1P	2#12+#12-3/4"C	FACTORY FURNISHED	KP-1-23	
EF-A2	EXHAUST FAN	120V	39W	20A 1P	2#12+#12-3/4"C	FACTORY FURNISHED	CONNECT TO RECEPTACLE CIRCUIT LRP-1-4	
EF-A3	EXHAUST FAN	120V	1/6HP	20A 1P	2#12+#12-3/4"C	FACTORY FURNISHED	PP-1-2	
EF-A4	EXHAUST FAN	120V	39W	20A 1P	2#12+#12-3/4"C	FACTORY FURNISHED	CONNECT TO RECEPTACLE CIRCUIT LRP-1-4	
EF-A6	EXHAUST FAN	120V	1/6HP	20A 1P	2#12+#12-3/4"C	FACTORY FURNISHED	PP-2(1)-32	
EPR-A1	ELECTRIC PANEL RADIATION	208V 1□	4.5KW	30A 2P	2#10+#10-3/4"C	FACTORY FURNISHED	PP-2(1)-34	
EPR-A2	ELECTRIC PANEL RADIATION	208V 1□	4.5KW	30A 2P	2#10+#10-3/4"C	FACTORY FURNISHED	PP-2(1)-38	
ECH-A1	ELECTRIC CABINET HEATER	208V 3□	3.0KW	15A 3P	3#12+#12-3/4"C	FACTORY FURNISHED	PP-3(2)-2	
ECH-A2	ELECTRIC CABINET HEATER	208V 3□	4.0KW	15A 3P	3#12+#12-3/4"C	FACTORY FURNISHED	PP-2(2)-1	
ECH-A3	ELECTRIC CABINET HEATER	208V 3□	3.0KW	15A 3P	3#12+#12-3/4"C	FACTORY FURNISHED	PP-2(2)-2	
ECH-A4	ELECTRIC CABINET HEATER	208V 3□	3.0KW	15A 3P	3#12+#12-3/4"C	FACTORY FURNISHED	PP-2(2)-7	
ECH-A5	ELECTRIC CABINET HEATER	208V 3□	2.0KW	15A 3P	3#12+#12-3/4"C	FACTORY FURNISHED	PP-1-4	
ECH-A7	ELECTRIC CABINET HEATER	208V 3□	2.0KW	15A 3P	3#12+#12-3/4"C	FACTORY FURNISHED	PP-1-7	
ECH-A8	ELECTRIC CABINET HEATER	208V 3□	2.0KW	15A 3P	3#12+#12-3/4"C	FACTORY FURNISHED	PP-1-41	
ECH-B1	ELECTRIC CABINET HEATER	208V 3□	2.0KW	15A 3P	3#12+#12-3/4"C	FACTORY FURNISHED	PP-4(1)-39	
EUH-A1	ELECTRIC UNIT HEATER	208V 3□	5.6KW	20A 3P	3#12+#12-3/4"C	FACTORY FURNISHED	PP-1-13	
EUH-A2	ELECTRIC UNIT HEATER	208V 3□	5.6KW	20A 3P	3#12+#12-3/4"C	FACTORY FURNISHED	PP-1-16	

NOTES:
1. WIRE PER SPLIT SYSTEM MANUFACTURER. THE INDOOR UNIT AND OUTDOOR UNIT ARE FED FROM A COMMON CIRCUIT. WIRE AS DIRECTED IN INSTALLATION GUIDE.
2. ELECTRICAL CONTRACTOR SHALL FURNISH (2) FIRE ALARM DUCT DETECTORS TO THE MECHANICAL CONTRACTOR FOR INSTALLATION. (1) FOR SUPPLY AND (1) FOR RETURN. UPON COMPLETION OF INSTALLATION E.C. SHALL BE RESPONSIBLE FOR ALL FINAL CONNECTIONS TO UNIT AND FIRE ALARM CONTROL PANEL FOR UNIT SHUT DOWN. NOTE: REFER TO MECHANICAL'S PLANS FOR EXTERIOR APPLICATIONS ROOF PLAN.

MECHANICAL EQUIPMENT ELECTRICAL REQUIREMENTS (ALT. BID 6)

ITEM	DESCRIPTION	VOLTAGE	LOAD	CIRCUIT BREAKER	WIRING	COMBINATION STARTER AND/OR DISCONNECT SWITCH	PANEL-CIRCUIT NUMBER	REMARKS
EF-A5	EXHAUST FAN	120V	39W	20A 1P	2#12+#12-3/4"C	FACTORY FURNISHED	CONNECT TO RECEPTACLE CIRCUIT LRP-1-4	
ECH-A6	ELECTRIC CABINET HEATER	208V 3□	2.0KW	15A 3P	3#12+#12-3/4"C	FACTORY FURNISHED	PP-1-19	

ELECTRICAL LEGEND

	EXIT SIGN, SINGLE OR DOUBLE FACED. ARROW INDICATES DIRECTION.
	NOT AN EXIT SIGN
$	SINGLE POLE WALL SWITCH CONTROL, 48" A.F.F.
$3	3-WAY WALL SWITCH CONTROL, 48" A.F.F.
$4	4-WAY WALL SWITCH CONTROL, 48" A.F.F.
$D	DIMMER SWITCH CONTROL, 48" A.F.F.
$OS	SINGLE POLE WALL SWITCH CONTROL WITH DUAL TECHNOLOGY INFRARED AND ULTRASONIC OCCUPANCY SENSOR, 48" A.F.F.
OS	DUAL TECHNOLOGY OCCUPANCY SENSOR, CEILING MOUNTED
	DUPLEX RECEPTACLE, 18" A.F.F. UNLESS NOTED OTHERWISE
	DUPLEX RECEPTACLE WITH GROUND FAULT PROTECTION, HEIGHT AS DIRECTED BY ARCHITECT
EWC	DUPLEX GFI RECEPTACLE FOR ELECTRIC WATER COOLER
	DOUBLE DUPLEX RECEPTACLE, 18" A.F.F. UNLESS NOTED OTHERWISE
	HEAVY DUTY RECEPTACLE, 18" A.F.F. UNLESS NOTED OTHERWISE
	TELE/DATA OUTLET REFER TO COMMUNICATION SCHEDULE FOR DETAILS. PROVIDE DEVICE BOX AND CONDUITS TO ABOVE ACCESSIBLE CEILING AS REQUIRED. SEE SPECS FOR DETAILS.
WAP B	WIRELESS ACCESS POINT
J	JUNCTION BOX
	MOTOR OUTLET
	MOTOR STARTER
	COMBINATION MOTOR STARTER / DISCONNECT SWITCH
	NON-FUSED DISCONNECT SWITCH
	FUSED DISCONNECT SWITCH
	ELECTRIC PANELBOARD SURFACE/FLUSH MOUNTED
	BRANCH WIRING LOCATED BELOW THE SLAB
	CIRCUIT HOMERUN LOCATED BELOW THE SLAB
	BRANCH WIRING CONCEALED WITHIN BUILDING
	CIRCUIT HOMERUNS CONCEALED WITHIN THE BUILDING
F	FIRE ALARM PULL STATION, 48" A.F.F.
	FIRE ALARM CEILING MTD SPEAKER/STROBE
	FIRE ALARM CEILING MTD STROBE
S	FIRE ALARM SMOKE DETECTOR
H	FIRE ALARM HEAT DETECTOR
CO	FIRE ALARM CO DETECTOR
FACP	FIRE ALARM CONTROL PANEL
ANN	FIRE ALARM ANNUNCIATOR
S	INTERCOM/PAGING SYSTEM CEILING SPEAKERS
	SOUND ENHANCEMENT
C	CLOCK
	TRUMPET STYLE SPEAKER
	SECURITY CAMERA
DC	SECURITY SYSTEM DOOR CONTACTS
CR	SECURITY SYSTEM CARD READER (BY OTHER)
CR*	SECURITY SYSTEM CARD READER (FURNISHED AND INSTALLED BY JCI)
KP	SECURITY SYSTEM KEYPAD
MX	SECURITY SYSTEM REQUEST TO EXIT MOTION SENSOR
RX	SECURITY SYSTEM REQUEST TO EXIT BUTTON
MD	SECURITY SYSTEM MOTION DETECTOR
ES	ELECTRIC STRIKE
PB	PUSH BUTTON
DR	DOOR RELEASE
E	ENTRY STATION
DB	DIGITAL DOOR BELL BY JCI. REFER TO SPECIFICATIONS.
J	AUDIO SYSTEM AUDIO JACK
HM	AUDIO SYSTEM HANGING MICROPHONE
DX	DIMMING SYSTEM DMX CONTROL RECEPTACLE
	BUTTON CONTROL
DB	DIMMING BOARD
SB	SOUND BOARD
	DATA RACK
WP	WEATHERPROOF
WR	WEATHER RESISTANT
A.F.F.	ABOVE FINISHED FLOOR
A.F.G.	ABOVE FINISHED GRADE
WG	WIRE GUARD
C.B.	CIRCUIT BREAKER
E.C.	ELECTRICAL CONTRACTOR
+	INDICATES DEVICE MOUNT ABOVE COUNTER

VOLTAGE DROP SCHEDULE

LOAD/VOLTAGE	MAXIMUM DISTANCE WIRE SIZE				
	#12	#10	#8	#6	#4
12A @ 208-1□	140	225	360	-	-
16A @ 120	60	90	140	225	360
16A @ 208-1□	95	155	245	395	-
16A @ 277-1□	130	200	330	525	840
24A @ 120-1□	-	60	96	150	240
24A @ 208-1□	-	100	165	260	420

SCHEDULE NOTES:

1. DUE TO THE SIZE OF THE FACILITY AND THE ALLOWABLE PLACEMENT OF ELECTRICAL PANELS WITHIN THE PLANS, VOLTAGE DROP WILL BE CRITICAL THROUGHOUT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ADHERE TO THE CONDUCTOR SIZES INDICATED. THE SCHEDULE ASSUMES THAT ALL CIRCUITS WILL BE LOADED TO 80% OF BREAKER RATING AND WITHOUT KNOWING THE USERS SPECIFIC INTENT FOR LOADS AT THIS TIME THE BRANCH WIRING SHALL BE INSTALLED AS SUCH.

2. THE ELECTRICIAN SHALL BE RESPONSIBLE FOR DETERMINING CIRCUIT LENGTHS AND REDUCING WIRE SIZE TO THOSE ACCEPTABLE AT THE DEVICE AND AT THE PANEL BUT NOT WITHIN THE PANEL. THIS MAY CONSIST OF A SPLICE BOX OR SIMILAR ABOVE EACH PANEL.

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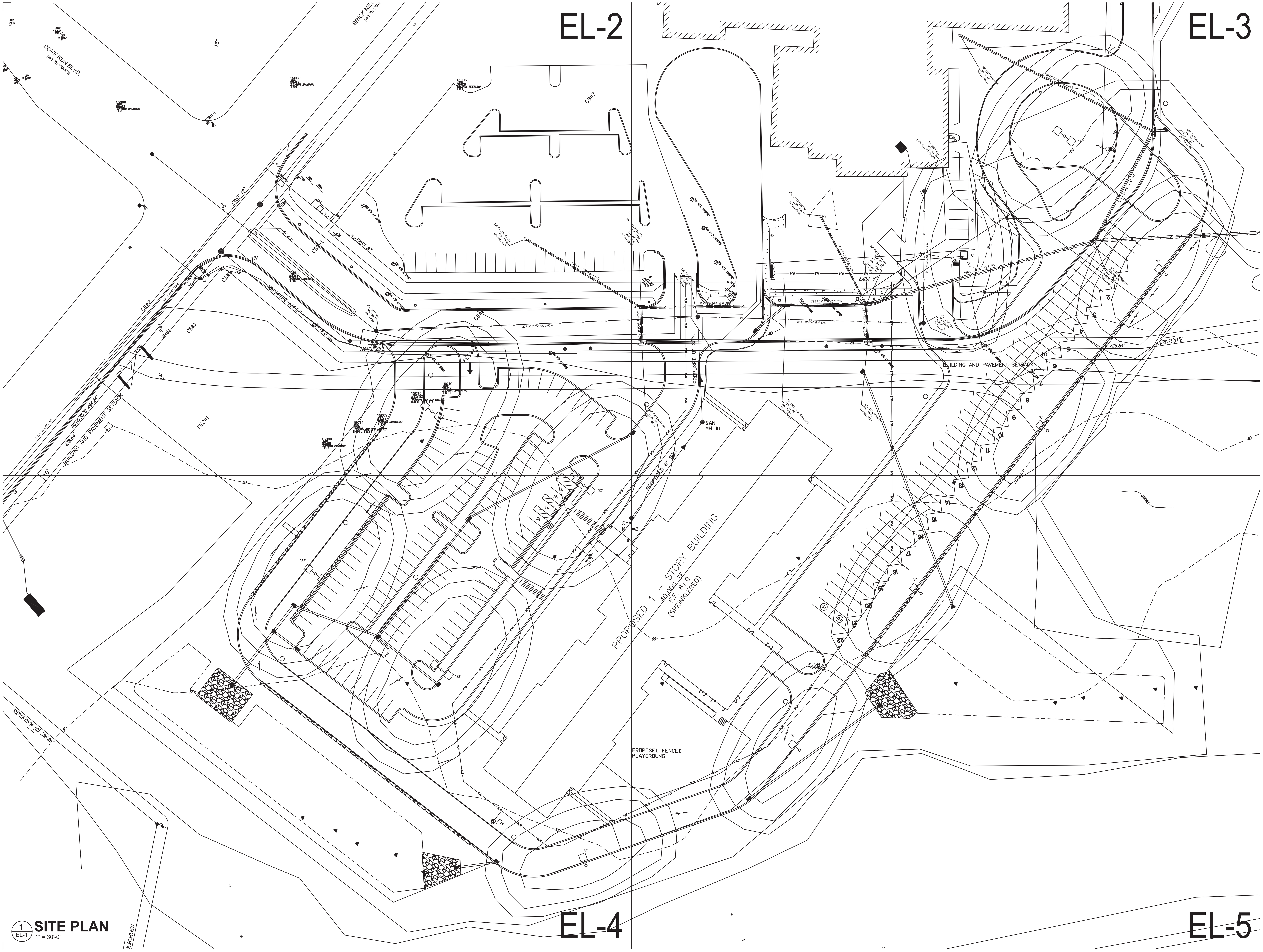
SCHEDULES & LEGENDS - ELECTRICAL

THE NEW:
BRICK MILL EARLY CHILDHOOD CENTER
APPOQUINIMINK SCHOOL DISTRICT
NEW CASTLE COUNTY, DELAWARE

AGENCY NAME
AGENCY PROJ #

REV#	REVISION DATE
1	07/14/2020

DRAWN BY YHW
PROJECT NO. 2001
SHEET NO.
E6.1
DATE 06/23/2020



1 EL-1 **SITE PLAN**
1" = 30'-0"

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SITE PLAN POINT TO POINT CALCULATION

THE NEW:
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APPOQUINIMINK SCHOOL DISTRICT
NEW CASTLE COUNTY, DELAWARE

AGENCY NAME
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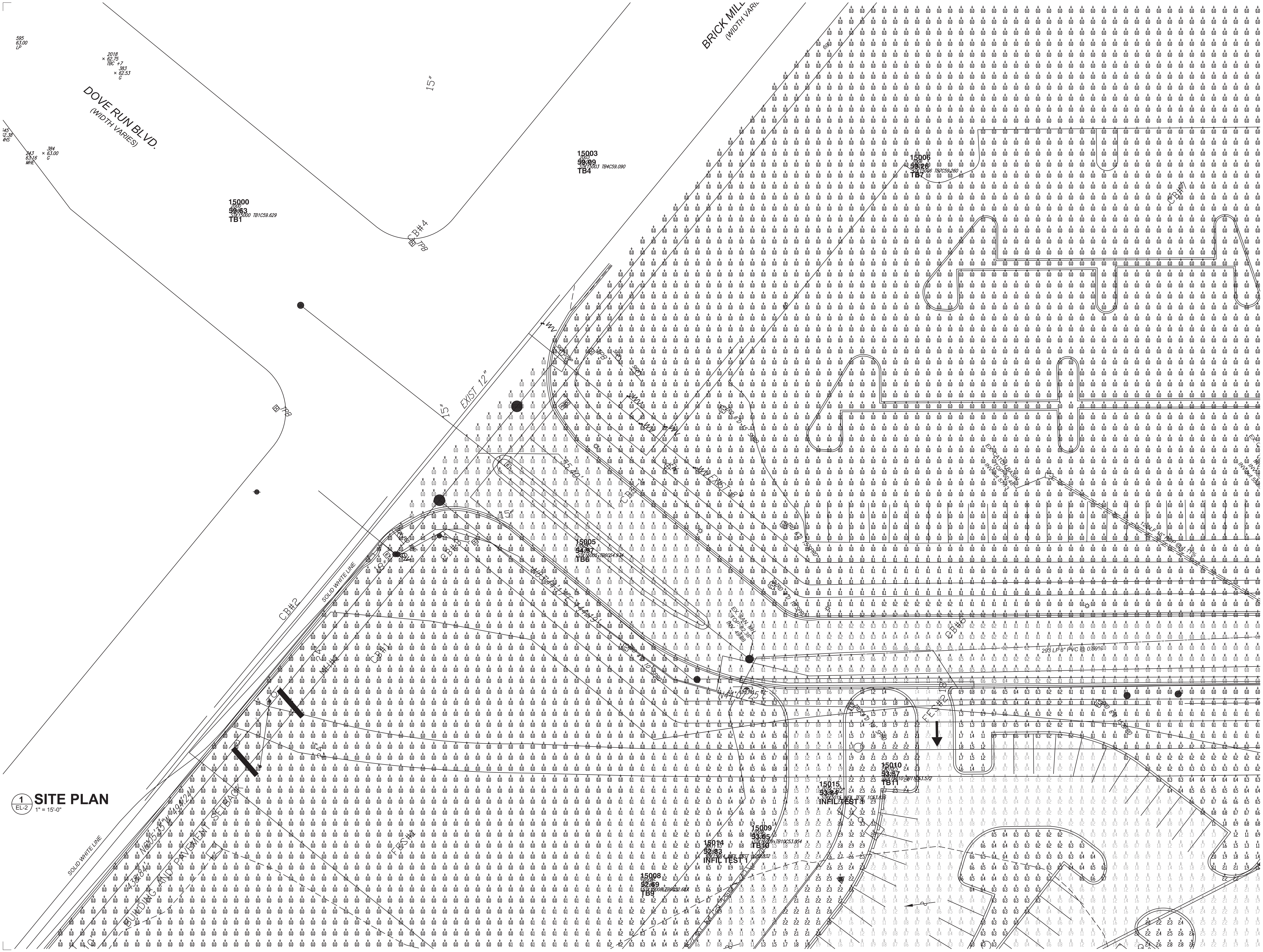
PROJECT NO.	2001
SHEET NO.	**EL-1**
DATE	05/01/2020



SITE PLAN
1" = 15'-0"

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SITE PLAN POINT TO POINT CALCULATION

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APPOQUINIMINK SCHOOL DISTRICT
NEW CASTLE COUNTY, DELAWARE

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SITE PLAN POINT TO POINT CALCULATION

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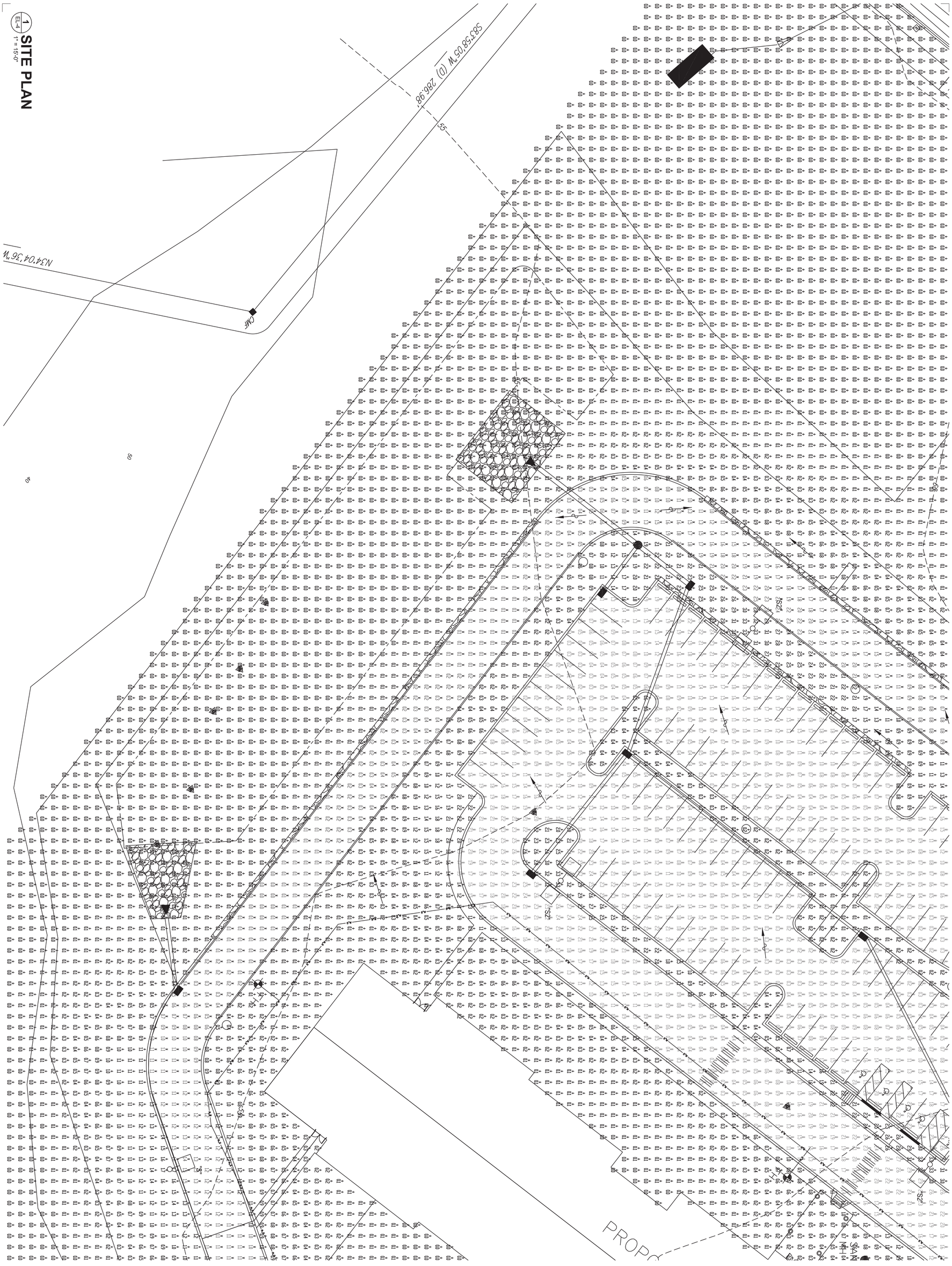
1 EL-4 SITE PLAN

1" = 15'-0"



SITE PLAN POINT TO POINT CALCULATION

THE NEW:

BRICK MILL EARLY CHILDHOOD CENTER

APPOQUINIMINK SCHOOL DISTRICT

NEW CASTLE COUNTY, DELAWARE

gilbert Architects Inc.

626 North Charlotte Street
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BID DOCUMENTS

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REV#	REVISION DATE
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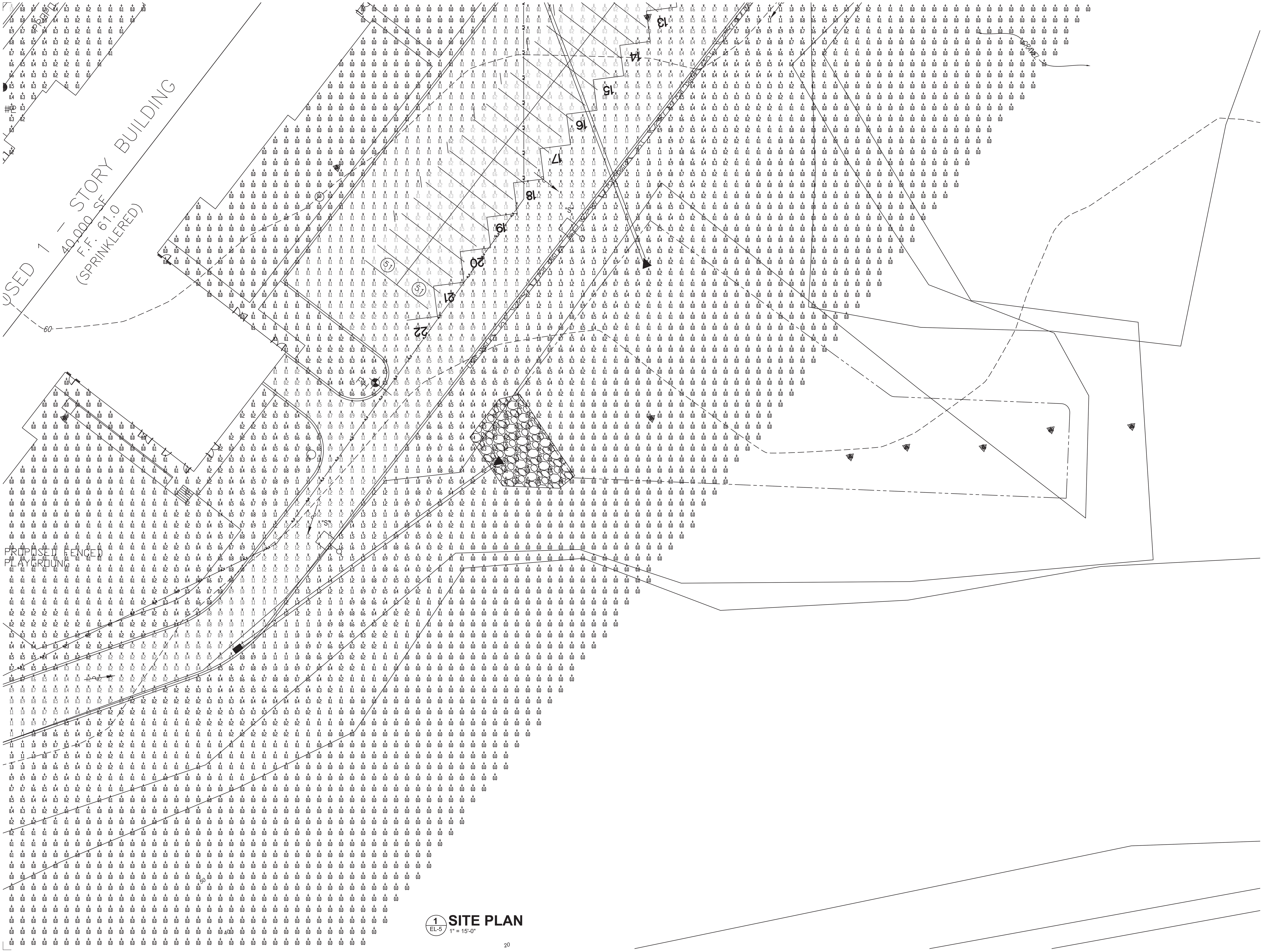
PROJECT NO.	2001
SHEET NO.	EL-4
DATE	05/01/2020



1 EL-5 **SITE PLAN**
1" = 15'-0"

20.013

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THE NEW:
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APPOQUINIMINK SCHOOL DISTRICT
NEW CASTLE COUNTY, DELAWARE

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AGENCY PROJ #

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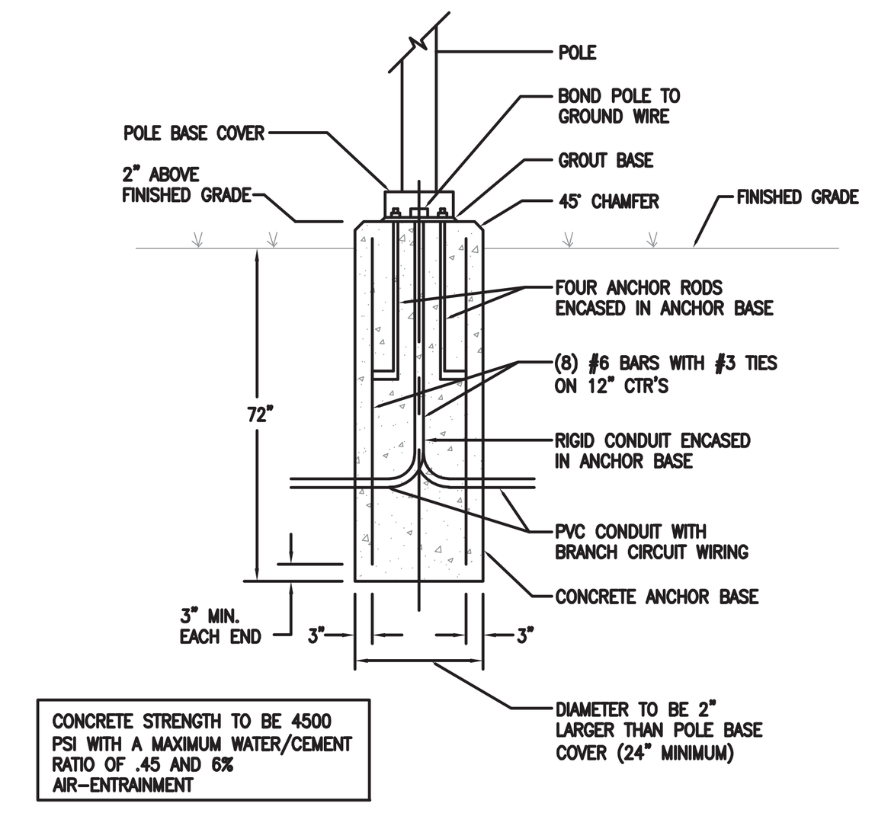
EL-5
DATE 05/01/2020



REINFORCED ANCHOR BASE FOR FIXTURES IN GRASS AREAS

NOT TO SCALE

LIGHT FIXTURE SCHEDULE

NOTES:

1. EQUIVALENT FIXTURE PACKAGES MAY BE SUBMITTED FROM THESE LIGHTING REPRESENTATIVES: DIVERSIFIED LIGHTING, ILLUMINATIONS, LIGHTING SOLUTIONS, AND PENN LIGHTING. FIXTURES SUBMITTED AS EQUIVALENTS SHALL BE OF THE SAME TYPE, DIMENSION, ACCESS TO BALLASTS, DRIVERS, AND LAMPS, PERFORMANCE AND QUALITY OF THOSE SPECIFIED. EQUIVALENT MANUFACTURERS MUST MEET ALL CRITERIA OF THE BASE FIXTURE SPECIFIED. ANY DEVIATIONS WHICH DO NOT REFLECT THE BASE FIXTURE WILL RESULT IN A REJECTED SHOP DRAWING DURING SUBMITTAL PERIOD.

2. ALL FIXTURE COLORS, FINISHES, AND MOUNTING HEIGHTS SHALL BE VERIFIED WITH THE ARCHITECT PRIOR TO APPROVAL OF SHOP DRAWINGS.

3. ALL LED DRIVERS SHALL BE INTEGRAL HIGH EFFICIENCY UNIVERSAL INPUT VOLTAGE DRIVERS, RATED FOR MINIMUM 50,000 HOURS AT 70% LUMEN MAINTENANCE, UNLESS NOTED OTHERWISE.

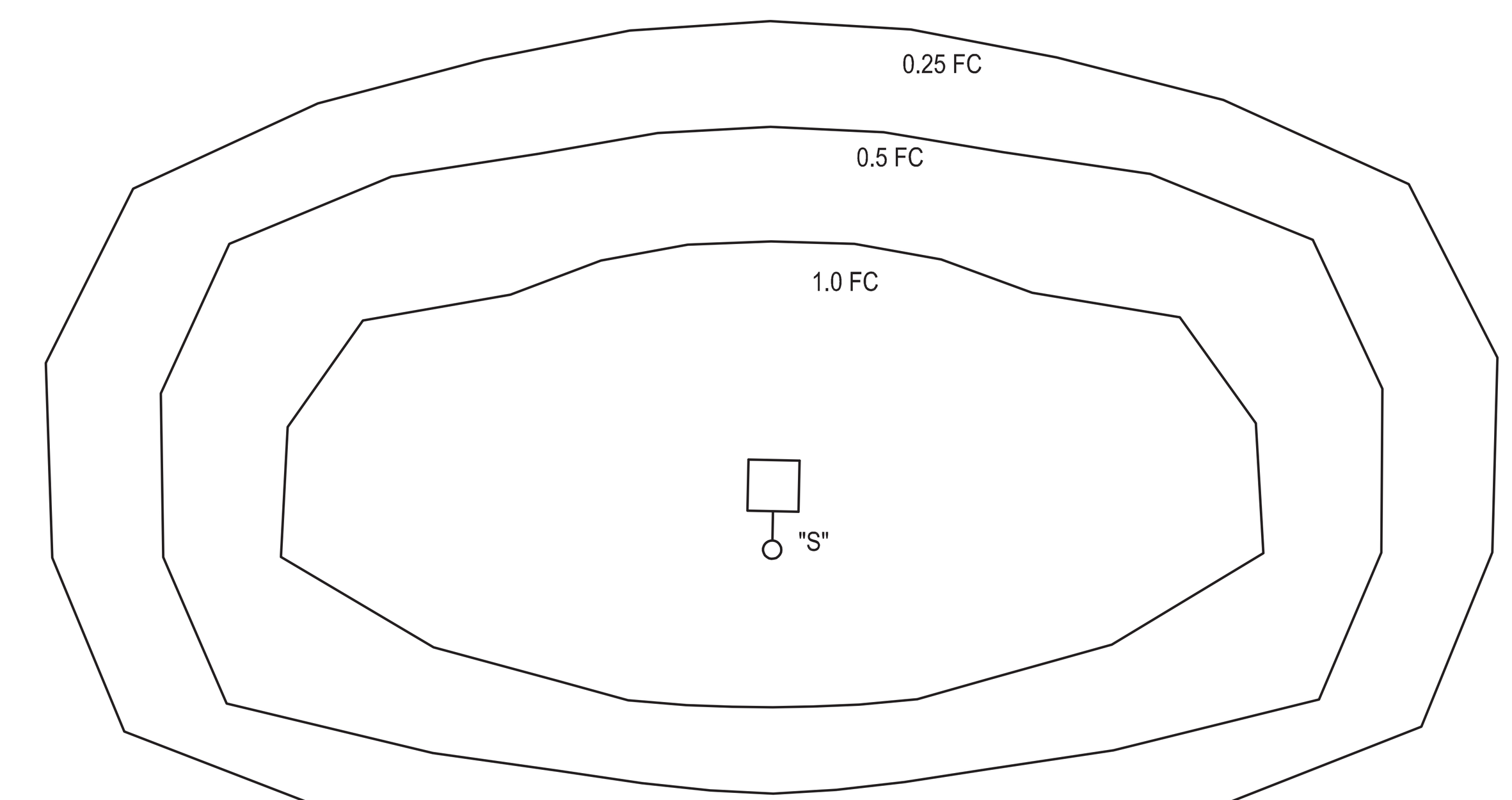
TYPE	MANUFACTURER	CATALOG NUMBER	LAMPS	MOUNTING	OPERATING VOLTAGE	REMARKS
S	McGRAW EDISON	FIXTURES: TLM-E05-LED-208-T3-WH-PT POLE: SSS-5-M-30-S-W-M-1-G	132W LED, 3000°K, 15420 LUMENS, CRI 70	FIXTURE ARM MOUNTED 30' A.F.G. ON POLE, POLE GRASS MOUNTED	208V	16-1/4"W X 23-1/4"L X 8"H ARCHITECTURAL AREA LUMINAIRE, DIE-CAST ALUMINUM HOUSING, STAINLESS STEEL LATCHES AND HINGES, INJECTION MOLDED ACRYLIC REFLECTOR AND LENS, IES TYPE III DISTRIBUTION, FULL CUTOFF, POWER TRAY, 8"L EXTRUDED ALUMINUM ARM, 30'H X 5"W STRAIGHT SQUARE STEEL POLE, 0.188" WALL THICKNESS, DRILLED FOR SINGLE FIXTURE, 10-1/2" SQUARE STEEL BASE, FULL BASE COVER, 3"W X 5"H HANDHOLE, TAMPER RESISTANT SCREWS, GROUND LUG, GRAPHITE METALLIC FINISH, UL LISTED FOR WET LOCATION.
S2	McGRAW EDISON	FIXTURES: TWO TLM-E05-LED-208-T4-WH-PT POLE: SSS-5-M-30-S-W-M-1-G	(2)132W LED, 3000°K, 15110 LUMENS, CRI 70	TWO FIXTURES ARM MOUNTED AT 180° 30' A.F.G. ON POLE, POLE GRASS MOUNTED	208V	SAME AS TYPE "S" EXCEPT IES TYPE IV WIDE DISTRIBUTION AND TWO FIXTURES AT 180°.

LUMINAIRE SUMMARY

TYPE	SYMBOL	DESCRIPTION	LAMP	LUMENS	MOUNTING	LLF
"S"		SINGLE SHOEBOX, IES TYPE III DISTRIBUTION	132W LED	15420	8" ARM 30' A.F.G.	0.90
"S2"		TWO SHOEBOXES AT 180°, IES TYPE IV DISTRIBUTION	264W LED	30220	8" ARM 30' A.F.G.	0.90

CALCULATION SUMMARY

GRID TYPE	# PTS	SPACING	GROUP	AVERAGE FC
HORIZONTAL	21450	5	+	0.19
	4104	5	⋇	0.55
	2739	5	‡	0.87



TYPICAL ISOCURVE TEMPLATE

SCALE: 1" = 30'-0"

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PROJECT NO. 2001

SHEET NO.

EL-6

DATE 05/01/2020